DEPOSITORY — Royal —

SHL
WITHDRAWN

UNIVERSITY OF LONDON
LIBRARY

THE INSTITUTION OF SURVEYORS.

TRANSACTIONS.

VOL. XIII.

SESSION 1880-81.

LONDON:

PUBLISHED AT THE INSTITUTION,

12, GREAT GEORGE STREET, WESTMINSTER, S.W.

[ENTERED AT STATIONERS' HALL.]

All rights of translation and reproduction reserved.

BIBL. LONDIN. UNIV.

LONDON:
PRINTED BY PHIPPS AND CONNOR, TOTHILL STREET,
WESTMINSTER.

CONTENTS.

PAGE.		No. of Paper.	Author of Paper.	Date.
v	List of Officers, Session 1880-81			
vi	Objects, &c., of the Institution .			1880.
1	Opening Address as President .	90	E. RYDE . .	Nov. 8.
43	The Law as affecting Quantity-Surveyors	91	F. TURNER. .	Nov. 22.
79	The Land Question in 1880 . .	92	D. WATNEY .	Dec. 13.
111	Discussion on Mr. D. Watney's Paper		. . . . .	1881. Jan. 10.
143	Rural Water Supply	93	J. LUCAS . .	Jan. 24.
179	Discussion on Mr. Lucas's Paper		. . . . .	Feb. 7.
201	Ecclesiastical Dilapidations . .	94	G. R. CRICKMAY	Feb. 21.
239	Sanitation as an important Increment of Value in House-Property	95	H. H. COLLINS	Mar. 7.
273	Discussion on Mr. H. H. Collins's Paper		. . . . .	Mar. 21.
299	Adjourned Discussion on ditto .		. . . . .	April 4.
325	Land Law Reform	96	G. M. FREEMAN	May 2.
365	Discussion on Mr. G. M. Freeman's Paper.		. . . . .	May 16.
395	Annual General Meeting and Election of Officers for 1881-82			
397	Report of Council			
402	Statement of Receipts and Expenditure, 1880.			
404	Memoir of Frederick Beadel .			
404	„ John Broughton . .			
405	„ William Henry Heath			
405	„ Charles Lee . . .			
408	„ David Llewellin . .			
408	„ Thomas Colville Scott			
409	„ Edmund James Smith			
418	„ The Right Hon. Lord Justice Thesiger .			
419	List of Donations and Contributions			
423	List of Members and Associates			
	SUPPLEMENT.			
i. to l.	Rules and Syllabus of Subjects, and Papers set at the Students' Preliminary and Proficiency Examinations, 1881 . . .			

NOTE.

This Institution does not, as a body, hold itself responsible for statements made or opinions expressed, either in the Papers read or in the discussions which have occurred, at the Meetings.

The Institution of Surveyors,

12, GREAT GEORGE STREET, WESTMINSTER, S.W.

OFFICERS, 1881-82.

COUNCIL.

President.

EDWARD RYDE

Vice-Presidents.

THOMAS SMITH-WOOLLEY
EDWARD I'ANSON
WILLIAM JAMES BEADEL
ELIAS PITTS SQUAREY

Members.

ROBERT COLLIER DRIVER
FRANCIS VIGERS
VIRGOE BUCKLAND
CHARLES JOHN SHOPPEE
THOMAS CHATFEILD CLARKE
CHARLES STEPHENSON
DANIEL WATNEY
WILLIAM SCARTH
JAMES MARTIN
THOMAS BINNIE
WILLIAM FOWLER
HENRY JAMES CASTLE

Associates.

RICHARD BOXALL GRANTHAM
FREDERICK MEADOWS WHITE

Past-Presidents.

JOHN CLUTTON
EDWARD NORTON CLIFTON
THOMAS HUSKINSON
WILLIAM STURGE

Treasurer.

CHARLES DRUMMOND

Honorary Secretary.

JOHN WORNHAM PENFOLD

THIS COUNCIL WILL CONTINUE UNTIL MAY 1882.

Members and Associates receive, fortnightly, copies of the Sessional Papers, and of all current publications of the Institution.

The Institution of Surveyors

Is established—

1. To secure the advancement and facilitate the acquisition of that knowledge which constitutes the profession of a Surveyor, viz.—the art of determining the value of all descriptions of landed and house property, and of the various interests therein; the practice of managing and developing estates; and the science of admeasuring and delineating the physical features of the earth.
2. To promote the general interests of the profession, and to maintain and extend its usefulness for the public advantage.

The Institution consists of three classes, viz.—Members, Associates, and Honorary Members, with a class of Students attached.

A Member must be more than twenty-five years of age, and have acquired a practical knowledge of surveying in one or other of its branches as above defined, and so practised on his own account for more than five years; or be a member of a firm of Surveyors established upwards of ten years; or in partnership with a Surveyor of ten years' standing. Every Member is eligible for election on the Council, for election or appointment to all offices of the Institution, and entitled to all its rights and privileges.

An Associate must be more than twenty-one years of age, not necessarily a Surveyor by profession, but his pursuits must be such as to qualify him to concur with Surveyors in the advancement of professional knowledge. Associates are not eligible for the offices of President or Vice-President, but are eligible for election on the Council or for election or appointment to other offices of the Institution; they have

access to the Library, subject to the regulations of the Council, and are entitled to vote and take part in the affairs of the Institution at all Annual, Ordinary, and Special General Meetings of Members and Associates.

An Honorary Member must be a person who, either by reason of his position or his eminence in science and experience, may be enabled to render assistance in promoting the objects of the Institution, but who is not engaged in practice as a Surveyor in Great Britain or Ireland. He has the privilege of being present and taking part at all Ordinary General Meetings, and of access to the Library, but no right of voting, discussing, or otherwise interfering in the affairs of the Institution; nor is he called on to contribute to its funds.

Students (who must not be under eighteen years of age) qualify as such by passing the Students' Preliminary Examination. Candidates for Studentship who can produce a Certificate of having passed the Matriculation Examination of the University of Oxford, Cambridge, London, or any other University in the United Kingdom, or who have passed, with Honours, the Senior Local Examination of the University of Oxford or Cambridge, are exempted from this Examination, and may be admitted by the Council on the recommendation (according to a form) of four Members and two Associates, or of the Member or Associate to whom they are or have been articled; but it is obligatory on all Students to undergo the Proficiency Examination at the close of their Student course, at the time and under the conditions applying in each particular case under the Rules of Examination.

The Council may accord to Students such privileges, subject to such terms, regulations, and restrictions, as they shall from time to time prescribe.

Any person desirous of being admitted into the Institution (excepting to the class of Students) must be proposed and recommended according to a form, in which the full name, place of business (if any), usual residence, and qualifications of the candidate must be distinctly specified. This form must be

subscribed by him, and signed by at least six Members or four Members and two Associates, certifying a personal knowledge of the candidate.

The proposal so made, being delivered to the Secretary, will be submitted to the Council, who, on approving the qualifications will determine the class for which the candidate is to be presented for ballot at an Ordinary General Meeting of Members and Associates.

The following are the rates of contribution to the funds :—

	Annual Subscription. £	s.	d.	Admission Fee. £	s.	d.
Student	1	1	0		—	
Associate	2	2	0	3	3	0
Member	3	3	0	5	5	0

An Associate may compound for his annual subscription for twenty guineas, and a Member for thirty guineas.

With the view of forming a Library and Collection, all Members and Associates are expected, within twelve months after their election, to deliver to the Council an original Paper on some subject connected with the profession, or to make a donation to the Library or Collection.

The affairs of the Institution are under the management of a Council, which is elected annually, consisting of a President, four Vice-Presidents, twelve Members, and two Associates. Besides the above, the Past-Presidents, and the President or Chairman of any local Association in alliance with this Institution, are Members of the Council *ex-officio*.

The Session of the Institution commences annually on the second Monday in November, and continues to the end of May. The Ordinary General Meetings are held on every alternate Monday during the Session. At these Meetings original communications are read on some professional subject, and their merits fully and freely discussed. Every Member and Associate has the privilege of introducing one visitor to these Meetings. Members and Associates are entitled to a copy of any printed publication issued by the Institution after their admission.

No. 90.]

THE OPENING ADDRESS

BY

EDWARD RYDE, PRESIDENT,

AT THE ORDINARY GENERAL MEETING OF

THE INSTITUTION OF SURVEYORS,

NOVEMBER 8TH, 1880.

GENTLEMEN,

With the fullest intention of making my Address to you as original as possible, I am compelled to imitate my predecessors in this particular—I am bound to say, as all those eminent men have said before me, that my first duty is to thank you for the very great honour you have done me in placing me in this Chair. I regret that, in copying them to this extent, I incur the risk of appearing to do so as a matter of course, and not as a strictly voluntary proceeding. Such, however, is far from being the case, and I tender you my warmest thanks for the great distinction which you have conferred upon me, a distinction which I fully appreciate, and regard as one which the ablest men in this Institution may be justly proud of, and which the youngest amongst us may well be ambitious to attain to. I accept the position with thankfulness, but, at the same time, with the strongest feelings of responsibility, and a resolute determination to uphold the dignity and usefulness, and promote the welfare of the Institution to the utmost of my power.

I can fairly congratulate the Institution upon its continued prosperity. In none of its departments is there to be found any cause for regret in the steps which have been taken in

connection with it. The building in which we are assembled, both as regards its situation and the accommodation it affords, is just what we stand in need of and leaves little to be desired. The Library continues to improve both in extent and quality, and now contains upon its shelves many rare and valuable books. Our Officers are heart and soul with us in promoting the best interests of the Institution. Our Members continue to increase in number, and it is scarcely too much to say that enrolled upon our books will be found the names of most of the leading Surveyors in Great Britain. Our Associates also continue to increase both in number and quality, and we now have the satisfaction of having among us both barristers and engineers of great eminence, who not only do us honour by becoming Associates, but who frequently, at the council table and at the discussions, render us very valuable and signal service. Men of high estate have been willing to become Honorary Members of the Institution. Our published "Transactions" constitute volumes for reference of a very high order. I have always been of opinion that the Papers which are read from time to time at our Ordinary Meetings, and the discussions which follow them, contribute largely to the success of the Institution, for it must always be borne in mind that, although comparatively few of the Members and Associates can attend the discussions in London, the reported "Transactions" go regularly into every corner of the United Kingdom and on to the Continent of Europe. Men of high position and attainment have taken the trouble to prepare many of the Papers, and there has never been found any indisposition to discuss them by the most eminent men, not only of our own profession, but in that of the Bar, Engineering, and other kindred bodies. Consequently our proceedings embody the views and opinions of men best qualified by experience to express an opinion upon most of

the subjects which interest Surveyors, and on that account they become text-books and works of reference of a high order.

I cannot pass from what may be considered as private topics to more public ones, without referring to the very great loss which the Institution and the profession have sustained by the untimely death of our Past-President, Mr. Edmund James Smith. As an ornament of, and a friend to, this Institution Mr. Edmund James Smith stood on the highest ground. His great experience, his dry humour, and his tact in the management of men were always at our disposal whenever they could be made useful to us. In the northern counties of England where he largely practised (and where, perhaps, it may be said of him who was known in most places, that he was best known), he will be greatly missed. Perhaps, in connection with that great work which brought his name so prominently before the public just prior to his death—the purchase of the London Waterworks—and even by those among the London ratepayers, both men of high and low dégree, who so severely and hostilely criticised his work, it may be found that a great void has been created by his death which cannot easily be supplied. Personally I feel that by his death I have lost another of those friends which a long professional career brings a man in contact with, sometimes labouring side by side, sometimes face to face; friends whom no young man can possess because he has not had time to acquire them, and which, from the same cause, no old man can replace when once they have been removed from him.

Allusion to Mr. Edmund James Smith and the purchase of the London Waterworks affords me a fitting opportunity of passing to the consideration of public matters interesting to the Institution, and the first matter to which, under the circumstances, I will refer is that contemplated

purchase. For the purpose of effecting economy in working, and of avoiding unnecessary outlay in the construction of duplicate, and even triplicate works, it is generally admitted to be desirable that the whole of the works, which now supply (each of them a portion of) London with water, should be merged into and become consolidated into one concern. It is also generally admitted that the governing body of such an undertaking should be persons who are not pecuniarily interested in making a profit out of the consumers. The exact constitution of such a body was probably not the point upon which the Home Secretary, for the time being, thought it necessary to consult Mr. Smith, neither perhaps was the sufficiency or insufficiency of the present supply of water. The great professional work upon which Mr. Smith was engaged was in negotiating for, and fixing the price of, the purchase of the existing works from the respective Companies who now own them, and this great work he successfully accomplished without compulsory powers. He succeeded in getting the whole of the Companies to enter into provisional contracts with him on terms finally settled and arranged. Every Member of this Institution who has had experience in the purchase of landed property, in cases where the owners are not bound to sell, knows how difficult it is to get everybody into an agreement upon satisfactory terms for the purchaser. Some of the vendors are to be arranged with easily enough, but there are generally two or three who stand out and are impracticable. Even under the exercise of compulsory powers, this often happens. But in the case of the London Water Companies, Mr. E. J. Smith dealt with them all, and upon terms which, it is just possible, future experience may prove to have been very reasonable and beneficial to the ratepayers, if they had been acted upon. I suppose it may be assumed that no British Parliament would ever be

elected which would confiscate for the benefit of some people the property of others, whether the application to them were for power to convert all the existing separate bodies into one new body of management, or whether it were for a new supply of water. If that be the case, then, as the "one professional negotiator with whom only," Mr. E. J. Smith, stated in his evidence before the Committee, he "had to deal," and whom he was "glad to get rid of as soon as possible," I have to state that, in my humble judgment, no better terms, or even so good, for the purchaser will ever be made as those which were arranged by Mr. Smith. The basis of those terms was the payment in paper by a $3\frac{1}{2}$ per cent. stock of the sum of £31,300,000, spread over a period of 12 years. If the nominal amount of that payment had been just half the amount of 7 per cent. stock, the purchase would have probably appeared to the public a very moderate one, while the security and value of the stock to the holders would have been precisely the same. The interest would have been met by the water rental, and, in the event of any insufficiency, the deficit was to be made up by the rates of London. No easier terms could ever have resulted from arbitration, and therefore it may be ultimately found that, in throwing over the agreements and Mr. Edmund James Smith, the interests of the ratepayers may not have been promoted: I am not quite sure, however, that it would be correct to say the same thing, as regards the interests of the Members of this Institution. There is much truth in the old proverb that "It is an ill wind that blows nobody good."

My immediate predecessor, in his last Address to you, dwelt very much upon the agricultural depression which has for so long a time afflicted us, and which was at that time at great intensity. He investigated very fully the causes which had led to that depression, dwelling mainly

upon the unfavourable seasons which had occurred in succession for several years. Unfortunately, it is not yet possible to speak of that depression as passed away, or to announce that brighter prospects have presented themselves to British farmers. It may be admitted that, on the whole, in England, the past season has been a much more favourable one for agriculture than the four or five previous seasons; and that, to some extent, this improvement has probably arrested the depression, and has prevented it from spreading to a greater extent than prevailed at this time last year, but it is scarcely safe to say that it has done more than that. The wet autumn of 1879, succeeded by a good deal of frost, retarded the wheat-sowing in many districts to a very backward period; and although two or three favourable months in the spring caused the wheat in most districts to do well, to keep a good colour, and to present a favourable aspect, which was maintained up to within a month of harvest, nevertheless, owing to the lateness of the sowing and the condition of the land, there was, in many districts, but a very thin plant. Added to this, about a month before harvest, a blight affected the straw, and a great deal of rain and storm so laid the crop that, at most, the wheat crop can be estimated at only an average one. The period of barley-sowing was a very favourable one, and the barley crop is probably a very good one; but, on the other hand, the acreage of barley sown was unusually small, and the straw, from the very fact of its being heavy, was much damaged and laid by the rain and storm previously referred to. Happily, a fine harvest period, though late and short, enabled a very great deal of the corn crops of England to be harvested in good condition; but, in the later districts, the farmers were overtaken by bad weather, and very great damage resulted. The bad weather, which injured the corn crops, just before harvest, saved the root crops, and

it is probably quite accurate to say that there is a large crop of mangold-wurtzel and an average crop of swedes.

The misfortunes among the tenants have naturally spread to the landlords. The inability of the tenant to pay rent has considerably embarrassed many landlords; and the probable fact, that nearly half of the capital of the tenant farmers of England has been lost during the last two or three years has thrown a large number of farms upon the owners' hands. It is probably correct to say that there are more farms now to be let than there have been at any one time for many years. The difficulties of the owners in cultivating and carrying on these farms until they can be relet, have been increased immensely by the depression in trade, and especially by the difficulties and disasters which have occurred in the banking business of the country. In former times, when a landowner had a farm on his hands, it was only necessary for him to go to his bankers and explain that he required the use of a sum of money with which to carry on the farm until it was relet, and the requisite amount was at once placed at his disposal. Such a state of things no longer exists. A landowner, under present circumstances, and with the present state of agriculture, is often unable to obtain an advance of money, for the purpose of cultivating a farm, without giving real security for the loan, which it is very often inconvenient to him to provide. Landowners and agents have had to consider seriously whether the return to the tenants of rent, almost universally made in 1879, must not be continued in the present year, and in very many cases it has been continued. Many farms, too, have been let at considerably reduced rents by landlords who have not felt able to work them themselves.

The combined effect of all this upon the fee-simple value of land has been materially felt. Agricultural land is no

longer regarded as it once was, as absolute and certain security for money, and the difficulty of realizing this kind of security increases the embarrassment. This state of real depression in England has been, moreover, very much augmented, as regards the fee-simple value of land, by the events which have happened in Ireland. The passing of the Irish Disturbance Bill by the House of Commons affected, let us hope only temporarily, the selling value of agricultural land in England, by creating a doubt in the minds of capitalists as to what might possibly be done in regard to English land; and the passing of the Hares and Rabbits Bill, although not a very serious measure in itself, has tended to increase the doubt.

The Irish land question is one which it has been very difficult for an English Land-Surveyor to understand, even in cases where the English Land-Surveyor has been discussing the question with practical men in Ireland; for, setting aside all the frivolous small talk of irresponsible agitators, there nevertheless appears to be a class of respectable men in Ireland who have persuaded themselves that there is a land question which must be dealt with by legislation before any appreciable improvement can take place among the agricultural population of the country. It is impossible, however, to suppose that any practical Irishman of intelligence can imagine for a minute either that Parliament will insist upon a landlord selling, under compulsion, a farm to a tenant—especially a tenant without capital—merely because he happens to be an agricultural tenant, and would like to become a landowner. Nor does it follow, if such a thing could be done, that it would work universal benefit. If an indolent tenant were to become a landowner, even without payment, he would be soon reduced to poverty, and would be unable to cultivate his land; indeed, there would be no inducement for a man

to save money if he could not be better off by thrift and industry than a man who is indolent and extravagant. Neither can intelligent Irishmen seriously think that it is impossible for a tenant farmer to live and do well, and pay rent to a landlord. Surely there is more interest to be made of money invested in trade than of money invested in the purchase of agricultural land. The establishment of a peasant proprietary on a large scale seems to be desired by some men; and if the Irish land question means that every farmer in Ireland is to be converted or transformed into a peasant proprietor, a very little investigation will show that no advantage would result to a large body of them by such a process. We can only guess what is meant by a peasant proprietor; but, perhaps, it means a man who owns and farms, say, 25 acres of land. If a man is an owner of 25 acres of land, he is, probably, worth £1,250, because, if it is land upon which a man would have the slightest chance of getting a living, on such an area, it can scarcely be worth less than £50 an acre. In addition to being the owner of his land, he must have £250 or £300 of capital to work it with. That would make him worth £1,500. With that advantage he would have to endeavour to get a living. It is very hard sometimes to make any profit upon 25 acres of land, but, assuming that the peasant proprietor could make £5 an acre, he would have an income of £125 a year. Being the possessor of £1,500 capital, for the use of which, in any trade security, he could get £75 a year, the advantage to him of being a farmer would be £50 a year, or something less than £1 a week. If such a man, instead of being a peasant proprietor, were a tenant farmer paying his landlord £2 an acre rent, his £1,500 would enable him to become the tenant of some 150 acres. If in that position he made £3 an acre profit, in addition to £2 paid as rent, it would amount to a total profit of

£450 a year, instead of a profit as tenant proprietor of £125 a year; or, after charging his profit with 5 per cent. interest on £1,500, it would leave £375 net profit as against £50. But the tenant farmers who are now in dire distress have NO means at all, and the settlement of the land question is to make them prosperous. How is that to be done? Perhaps it means that Government aid is to be secured, and that the £1,500 is to be lent to the peasant proprietor at 3 per cent. interest. In that case he would have to pay the Government £45 a year interest, and would then have but £75 a year left for himself. A bad season, or disasters among his stock, might at any time wipe away that £75. Surely no Irishman can suppose that the Government are to lend money upon terms which, failing the payment of interest, would preclude them from calling in the capital; and then what would become of the peasant proprietor, and who would take his land next? (Just, in parenthesis, I would here enquire, if the broken-down farmer is to be set up again in business by means of Government aid, why the unsuccessful grocer, butcher, baker, or any other trader should not be entitled to the same assistance?) It is a matter very difficult to understand, is this land question in Ireland.

There appeared in *The Times* newspaper, on the 5th October last, a letter from Mr. THOMAS ROBERTSON, of Narraghmore, Athy, which probably puts the case in the best way, from an Irishman's point of view, in which it can be put. Mr. ROBERTSON thinks that in England there is no parallel to the case of landlord and tenant in Ireland. He states that in Ireland "all the buildings, fences, farm roads, surface improvements, and the drainage are the investments of the tenants. Even where the landlord borrows money for drainage purposes, the tenant is made to repay, in the shape of increased rent, and is, there-

fore the person who has made the expenditure in the end." But surely such a case as that is to be met with in England. In the Cities of London and Westminster there are thousands of instances where land has been let by the freeholder to the lessee, upon which the lessee has built all the buildings and fences, and made all the roads, surface improvements, and drainage. I did the very thing myself upon the DUKE OF WESTMINSTER'S land. But in England it is always done in a business-like way; no tenant does it without ample security for his outlay. In every case he secures a lease for a fixed term of years; the landlord gets the ground rent only during the existence of that lease, and the lessee makes his calculation to recoup all his outlay within the period of his lease. Therefore we have, in England, cases exactly parallel to that state of things which exists in Ireland. But if it is meant that in Ireland a yearly tenant has done all this inadvertently, the answer is, that a man who would spend all his money on the bare security of a yearly tenancy would scarcely succeed in any business.

Again, Mr. ROBERTSON says that, in Ireland, "the tenants own all the highways, the bridges, the gaols, the county court houses, and other like contributaries to the civilization and to the preservation of the peace and order of the community," that is, if the "purchasing and the paying for the sites of these, and the constructing and the maintenance of them, be sufficient to constitute property." This means, I suppose, that the Irish tenants pay highway rates and county rates, as English tenants also do. And further on, Mr. ROBERTSON says, that Irish tenants pay one-half the poor rate. In England, the tenants pay the whole of the poor rate. This circumstance should not be forgotten in any comparison which may be made between rents in Ireland and rents in England. It has not been

stated whether the landlord, who is not to continue to receive his rent, is nevertheless to continue to pay half the poor rate.

Paraphrase this.—Let me, as your PRESIDENT, announce that all the Board schools recently erected in England belong to the tenants of real properties in England, because, under the Elementary Education Act, they are paid for out of rates paid by the tenants. I do not pause for an answer, but I repeat that the Irish land question is difficult to understand.

It seems to me that, if legislation is to take place in respect of Irish land, the first enquiry which should be made is whether it would really be equitable to assume that the tenant has some material interest in the land which he occupies; and it would only be in the event of its being so proved that some advantage should be given to him. If, however, that is proved, an Englishman may well be forgiven for thinking that the proper remedy should enable the landlord to compensate the tenant, and not that the tenant should be able to compel the landlord to sell his land. It would be very easy to appoint a Commission or to constitute some other tribunal before which an enquiry might take place, whose decision should be binding upon the parties. It would also be very easy to give to such Commission power to determine the manner in which compensation should be paid to the tenant. If Parliament should decide that Government aid is to be given, money might be advanced to landowners who found themselves called upon to pay compensation to their tenants. All that would be wanted in that case from the Government, would be the assistance of its security, under which the money could be borrowed at 3 per cent. If that were lent to landowners at 4 per cent., the 1 per cent. of profit to the Government, invested by way of a sinking fund,

would, in about 40 years, pay off all the capital, and, at the expiration of that time, the landlord would be free from the obligation to pay the interest upon the loan.

But assuming the Irish tenant so compensated, and having this money paid down, he would have to understand that the moment that was done the full value of the land, whatever it might happen to be, would belong to the landlord. There must be no question about excessive rent. The value of land is what it will bring in the market, and no farmer must expect to be called upon to pay for the occupation of land a less rent than another farmer would be willing to pay for the same land, in the open competition of the market. There is no reason why the landlord should not get the best rent he could. Of course, he must take care that he does not accept a tenant upon the bare prospect of paying a high rent, without being satisfied that the rent is one which the tenant can afford to pay.

There would be another way of compensating the tenant. It might be left to the Commissioners to say how long a lease should be given to him at his present rent, or at a low rent, in consideration of the interest which he has in the land by the outlay which he has made upon it. But this mode of settlement should only be adopted in the event of both landlord and tenant agreeing to it.

There is no reason why the possession of land in Ireland should not carry with it the advantages which the possession of land in England has hitherto carried—advantages which cannot be fully enjoyed at all times, unless the owner of the land has the power to fix a time at which he may resume possession of it at his will and pleasure. The term fixity of tenure has no meaning without explanation. But no settlement of the land question, whatever it may mean, and no legislation with regard to the land, can be of the slightest use unless it is possible to put in force the civil law in Ireland as is done

in England and every other civilized country in the world. So long as it is possible for people who are not the owners to enter upon the land and cart away the crops, and altogether escape detection and punishment, so long will capital be kept away from Irish land, and land in Ireland will be deeply depreciated.

But if legislation is to take place for the benefit of Irish land, I think that circumstance, coupled with the present agricultural depression, affords good reasons for asking that English land may also receive consideration. The Tithe Commutation Act, which was an excellent measure at the time it was passed, has been very beneficial and successful in its operations. Nevertheless, it has given rise to some discontent among the clergy, and is not without objection as regards the landowners. In the case of lands situated near to large towns to which building operations from time to time are extended, the reapportionment of the tithe rent-charge, to say nothing of the collection of it, is a matter of some difficulty. I should like to suggest that the example set by the Irish Church Act of 1869 and the Amendment Act of 1872 should be followed in connection with English land so far as it related to the tithe rent-charge. It has often occurred to me that the landowners of Ireland were presented by the Government with their tithes without any payment. What was done amounted to this; they were told that, instead of continuing to pay their tithe rent-charge in perpetuity, they might, if they pleased, purchase the rent-charge on the principle of a loan, repayable by annual instalments extending over 52 years. The amount of annual rent-charge (less such sum in the pound as the owner shall be ascertained by the Commissioners to have been, on an average of two years preceding the passing of "The Irish Church Act, 1869," entitled to deduct for poor rates from the tithe rent-

charge payable by him) was multiplied by 22½, and then £4 9*s.* per cent., calculated on the product, gave the annual instalment which, paid for 52 years, extinguished the rent-charge; *e.g.*, if the rent-charge was £100, and the average poor rate 1*s.* in the pound, the annual instalment was £95 2*s.* 4*d.* The rent-charge, of course, would be £100, less £5, that is, £95; so that, instead of paying £95 for ever, the Irish landowner had to pay £95 2*s.* 4*d.* for 52 years, and in that way he bought his tithes. In other words, that operation became possible by the Government lending to the landowners its security for raising money. In fact, the tithes of Ireland were purchased at that time at 22½ years' purchase, that being upon the 4½ per cent. table, the Government lending the money to the landowners at that rate of interest, but borrowing it themselves at a lower rate, and with the balance, invested as a sinking fund, recouping themselves the amount of their principal in 52 years. No other class in England would be injured if the landowners in this country were in the same way assisted by the Government with money to redeem the tithe rent-charge. The landowners would have to pay 25 years' purchase for the rent-charge. They would borrow that sum of the Government at 4 per cent. interest upon the loan, which interest would exactly represent the amount of rent-charge redeemed. They would have to continue that payment for 40 years, and then it would cease. They would be released immediately from all transactions with the tithe-owner, and their annual payments would be fixed, instead of fluctuating according to the price of corn, as is now the case. Great facilities for improving the land would be thus afforded. The tithe-owner would be much better off with the amount of his principal in money than he now is as the owner of the rent-charge. He could invest it in securities which would return him the same

income, and without giving him the trouble and expense of collecting to which he is now put, and all disappointments and bickerings in connection with the tithe rent-charge would cease. This plan might be put in force as regards rectorial tithe in all cases, probably, without opposition; but whether the Ecclesiastical owners of the vicarial tithe rent-charge would in all cases be content with twenty-five years' purchase is perhaps more doubtful. At all events the option might be given to vicars to redeem their tithes on those terms, and the few exceptions in which they would not prefer to redeem might stand over for future adjustment, allowing the great bulk of tithe rent-charge to be wiped away. This is not the place to suggest how difficulties of that sort should be dealt with. It would be quite possible to make compulsory provision in the Act that future incumbents should be entitled only to the interest upon a sum of money equivalent in value to that of the tithe rent-charge. That is a matter of detail which would have to be dealt with in the Bill.

In a similar manner compulsory redemption of the land-tax should be made. There is, perhaps, no tax so unfairly and unequally levied in this country as the land-tax. It is worthy of observation here that no Paper upon the land-tax is to be found among the "Transactions" of this Institution. Several of our Members and Associates have, from time to time, promised to produce such a Paper, but from one cause and another those promises have never been realized. One much-respected Associate of this Institution was much busied in the preparation of such a Paper, but unfortunately he did not live to carry out his intention. One of our Members, who would have produced a Paper of great interest, found out, or thought he had done so, that he had not sufficient time to enable him to prepare it. He will probably read this Address, and when he does so he may

perhaps be inclined to reconsider his determination; and if he does, I shall be very pleased to arrange that he should have an opportunity of reading his Paper in the course of the ensuing Session.

I have said that the land-tax was inequitably raised. Its inequality began from the very first. It was originally intended to be a tax of a fixed sum in the pound upon the annual value of all property; and the annual value of every piece of property in England at the time the tax was first levied was ascertained; a schedule was made of the amount in each county, and that sum was demanded from each county. A quota of that sum was demanded from each parish. That quota was never altered. In some parishes property has increased immensely in value; new houses have been built, and agricultural land has become building land and covered with valuable buildings; but the quota of land-tax due from the parish has not been altered. It is obvious, therefore, that the amount in the pound in such a parish is very considerably reduced, and so ridiculous has the inequality now become, that the amount of the burthen in some parishes is ten times as great as in others. To this inequality has been added another of a very serious nature. Landowners were enabled to redeem the land-tax, and did so redeem it. Their property has been removed from the list for many years. These redemptions were made without a plan. No one could tell how much had been redeemed, and any landowner who feels himself aggrieved by the charge made upon him in respect of the land-tax finds it absolutely impossible to appeal with any success against the assessment, by reason of the impossibility of describing what lands in the parish should be charged. There is also another difficulty. The appeals against the land-tax are to a body of commissioners who act upon the reports of assessors who are supposed to make a new assessment every year.

These assessors are not Surveyors or land-valuers. Of course the assessor states that his assessment is correct. The Commissioners consider that he is less interested in it than the man who is appealing and who is to pay upon the assessment. There is no further Court to which the appeal can be carried, unless the Commissioners will agree to a reference; and the only terms upon which they will agree to a reference are terms which leave the appellant to pay the costs. In some cases appellants have been willing to pay the costs. In one case, especially, a great Railway Company appealed and felt so determined to get the land-tax assessment put upon a correct basis that they undertook to pay the costs. The matter was referred to a competent Land-Surveyor, and every effort was made to put the case before him in a manner which would enable him to say whether the amount of land-tax in the parish in question was fairly and equitably raised. It was found, however, impossible to ascertain which were the redeemed lands in the parish and which were unredeemed; and, therefore, although the appellant was willing to pay the costs, the whole appeal had to be abandoned, and the assessment charged had to be paid, on account of the impossibility of showing what the assessment ought to be. It will readily be seen that if such difficulties attend the prosecution of an appeal in such a case where the most skilled Surveyors were employed to get up the appeal, a valuation made by non-professional assessors must be very unreliable indeed.

Among the expected legislation of the ensuing Session is a measure for amending the law relating to parochial valuations. It had been the intention of the late Government to extend "The Valuation (Metropolis) Act, 1869," to the whole country, and a Bill was twice brought into the House with that object, but defeated by want of time. Before such

a measure is again introduced it is extremely desirable that the inconvenience of making a new valuation of every parish in the country at the same time, once in five years, should be brought under the notice of the Government.

The year which is just drawing to a close has been the quinquennial period for making a new valuation of the Metropolis, and the amount of work which it has produced can scarcely be conceived by those who have not been engaged upon it. It is hardly too much to say that it would be absolutely impossible to make a new valuation of the whole of England and Wales within the period which is allowed for making such valuations under "The Valuation (Metropolis) Act, 1869," nor could the difficulty be met by an increase in the number of Surveyors, because such Surveyors would only find employment every fifth year, and have nothing to do in the way of similar employment for the four intermediate years. I am aware that in all probability the great bulk of the new valuations would be made by the Overseers themselves; that is to say, the property would not be really valued, but the Overseers would exercise their discretion as to increasing or diminishing the various items of the old valuation. This would apply to all houses and to many farms, but there is a very large amount of special property requiring technical knowledge to value it, and which never can be valued afresh without the intervention of professional Surveyors. It is quite true that a large number of men who get employed in this way are not Surveyors in the strict sense of the term. Many of them are men who have risen from other occupations and businesses. They are of course men of quick intellect, and men of observation, and they have shrewdness enough to see that in the valuation of certain properties, such as railways, gasworks, waterworks, and the like, they have only to put a sufficient increase upon the

former valuation, and the Companies themselves then have to prove the real value of the property, as appellants, at the sessions. The passing of such an Act as I am now referring to would increase the number of this class of men, but, making all allowances for the work which they would do, and the valuations which would be made by the Overseers themselves, there would remain such an amount of work for experienced and expert Surveyors to do, as would render it impossible that it could be well done in a limited period such as would be provided by the Act.

It would be sufficient for all purposes if provision were made for a new valuation in every parish once in five years, without making it necessary that the whole of them should be made in the same year. The object, no doubt, of having them all made in one year, is that all property in the country once in five years should be equally valued; but the difference of doing it all at one time, and dividing the work equally over the whole five years, would really be very slight. In one union, the property might all be valued, say, in the year 1881 and again in 1886; in another union, it would be all valued in 1882 and again in 1887. It might well be that property in 1882 was a little higher in value than it was in 1881, and that therefore the parishes valued in 1882 would be valued at a little higher rate, and be paying on a little higher assessment, than those valued in 1881; but the consequence would be very small, because those which were valued in 1881 would come to be valued again in 1886, and would then be put at a higher rate, whereas the parishes which would have to be valued in 1887, and which felt the increase of 1882 over 1881, would not feel any other increased assessment until a year later than the former parishes. On a series of years, therefore, exactly the same object would be accomplished, and, on the whole, the work would be much better done, because

there would be ample time allowed for making the valuations. Moreover, the difference between valuations in two unions could not in any event be greater than 2½ years, because, if a greater period than that had elapsed since the last valuation in either union, a less period would remain before a new valuation must be made. Moreover, the making of these valuations would gradually get into the hands of experienced Rating-Surveyors, and a more satisfactory result would follow the proposed arrangement than would be possible under the system which now prevails in the Metropolis. The fact is, that very little alteration is required in the present state of the law relating to parochial assessments. What is required is that the present law should be properly enforced. In many unions, a new valuation has not been made oftener than once in 30 or 40 years. I was professionally engaged in some rating business, in the north of England, about two years ago, in a union in which no new valuation had been made for 43 years. Of course the greatest inequality results from such a state of things as that. In other instances in which new valuations are made the benefits likely to result as regards equality are entirely lost on account of the manner in which the work of making the new valuation is let by the Assessment Committee. Advertisements are issued and tenders are invited, and nine times out of ten, provided the man who sends the lowest tender has had any experience at all, or at all events just sufficient to enable him to call himself a Surveyor, that man's tender is accepted, because it is the lowest. In other cases, where a really competent Surveyor desires to have the work, and has not much other work to do at the time, his tender is sent in at a very low amount, because he knows that if he offers to do the work on remunerative terms there is no chance of his getting it to do, and, in the event of his tender being accepted, he is driven to all kinds

of expedients to get the work done, so as to give him some small remuneration for his time and trouble. A proper valuation in that case does not result. It is one of that class of businesses that can never be properly done, unless it be entrusted to competent hands and properly paid for.

As long ago as 1861 I addressed a letter to the Right Honourable Sir GEORGE CORNEWALL LEWIS, then Secretary of State for the Home Department, upon the occasion of a Bill being introduced to amend the law relating to parochial assessment. That Bill was ordered to be printed on the 8th of February, 1861. In that letter to the Home Secretary I suggested that, if the Bill was to be allowed to proceed, the following alterations should be made in it, namely :—

" I.—That Section 3 be amended as follows :—' Provided ' that, notwithstanding the Repeal of the said ' Act of the 6 and 7 of King William IV., every ' Rate for the Relief of the Poor shall be made ' upon an Estimate of ' THE NET ANNUAL ' VALUE ' of the several Hereditaments rated ' thereunto, that is to say :—

' THE GROSS ESTIMATED RENTAL ' shall be the rent at which the same hereditaments might reasonably be expected to let, from year to year, to a tenant who is to pay all usual tenant's rates and taxes, and tithe commutation rent-charge (if any), but who is not to be bound to do repairs, nor to insure.

' THE NET ANNUAL VALUE ' shall be the balance of such ' *Gross Estimated Rental* ' which shall remain, after deducting therefrom the probable average annual cost of the repairs, insurance, and other expenses, if any, necessary

to maintain the hereditaments in a state to command such rent.

"II.—That power of appeal to the Court of Quarter Sessions, as it now exists, and to '*The Assessment Board*,' instead of the present appeal to Petty Sessions, be given to every person who is aggrieved by any Valuation List, or who has any objection to any person being put on such list, or left out of such list, or to the sum charged on any person or hereditaments therein; and that '*The Assessment Board*' be authorized, if they see fit, to refer the matter of such appeal to a sole arbitrator, or to two arbitrators and an umpire, in the usual way.

"III.—That copies of all notices relating to the making, altering, depositing, confirming, or otherwise affecting any Valuation List, shall, in case of a ratepayer being non-resident in the parish, be sent to such ratepayer through the post, addressed to his usual or last known place of abode. And, in the case of a Company, such notices shall be sent to the Secretary, addressed to the head offices of the Company."

It will be seen that my object was to make clear first of all what was meant by "gross estimated rental," and what by "net annual value," there being at that time, as there even is at the present time, much misapprehension as to what is meant by these terms. Many people are still under the impression that gross estimated rental is the actual rent paid as well, whether it is paid under a lease with covenants binding the lessee to bear all the expenses of insurance and repairs, or whether it is paid by a yearly tenant who is under no such obligation. In the second place, it will be seen that, even at that time, I was an advo-

cate for changing the tribunal for hearing appeals. It is pretty well known in this Institution that my view in that respect is that a Court of Arbitrators should be appointed, consisting of two Surveyors and a Barrister, whose province it should be to hear appeals respecting parochial assessments, and also to try questions relating to disputes concerning light and air. My proposal goes to the extent of precluding the two Surveyors and Barrister from practising in any capacity except as arbitrators or umpires, which would, of course, involve the payment of such arbitrators upon a sufficiently liberal scale to enable the appointment to offer attractions to men of good position and standing.

The third recommendation, it will be seen, had reference to notices in the case of ratepayers non-residents in the parish, and that recommendation has been adopted in "The Union Assessment Committee Act." At that time it was my opinion that very little alteration, beyond the three points suggested by me, need be made in the existing law, and I am still of opinion that a very short Bill, rendering it obligatory upon every Assessment Committee to obtain a new valuation of the property once in five years, and establishing an improved Court for hearing appeals, would, in the words of the Act of 1836, to regulate parochial assessment, be all that is requisite to bring about a uniform mode of rating for the relief of the poor throughout England and Wales, or, in the words of "The Union Assessment Committee Act of 1862," establish a more effectual provision for securing uniform and correct valuations of parishes. A printed copy of this letter is placed in the Library for the inspection of the Members.

Many people lose sight of the difference between the incidence of taxation and the mode of levying the tax itself. By the incidence I mean the question upon whom the

payment of the tax actually falls. To give a simple illustration of my opinion. There is no reason why so large a portion of the expense of carrying out the Elementary Education Act should fall upon the landed proprietors of England and Wales. It is just as much for the benefit of the bond-holder or the proprietor of Railway Debenture Stock, that the population of England should be educated, as it is for the interest of the landowner, and it would have been a much fairer thing if all the expenses of working that Act of Parliament had been charged upon the Imperial Exchequer, instead of being charged upon parochial taxation.

The expense of repairing the highways is another illustration. The man who derives the whole of his income from other sources than land has just as much enjoyment and use of the public highways as the occupier of landed property, and yet he pays nothing towards the maintenance of the highways. This is what I call the incidence of taxation; and, in my opinion, at this period of extreme depression, it would be a very reasonable and proper and fair thing to ask that the landed interest should in this way be relieved from the payment of such taxes as these. The landowner and occupier would not escape from his fair share of taxation by charging the expenses upon the Imperial Exchequer. All who contribute to the Income Tax, at all events, would bear their fair share, but the relief to land would be considerable.

Dealing with the incidence of taxation, some people are of opinion that, if certain taxes were paid by the landlord, and not by the tenant, the occupiers of land would be benefited. This is purely a mistake. The fact is that all rates and taxes charged upon land are, in the long run, borne by the landlord, because, if there were no taxes at all to be paid by the tenant, the tenant would pay a much higher

rent, and it is always the case in parishes where the rates are high that the rents are lower in proportion.

While upon the subject of local taxation and the Elementary Education Act, I would just refer to an abuse of that Act of Parliament which is growing daily, and which increases the inequality of the incidence of taxation upon the land. It is the fact that in most Board schools there are now being educated the children of parents who are very well able to pay for their children's education. So far as I can make a calculation, I am of opinion that the approximate amount of the cost of educating such children which falls upon the general ratepayers of the parish is about 50 per cent. of the actual cost of the children's education. I am aware that it is said that in making that estimate I am including in it the cost of providing the school buildings in addition to the cost of tuition, and I answer that I am quite justified in doing that, because, if those children were excluded from the Board schools, a much smaller amount of money would have to be spent upon the erection of school buildings. I do not advocate the exclusion of such children from the Board schools, but I think that the weekly payments made by the parents of such children should be much larger than the payments made by labourers and others in the parish who cannot afford to educate their own children, and for whose special benefit the Elementary Education Act was passed.

The facilities for making parochial valuations have been much increased by the publication of the Ordnance Surveys. It is very much to be regretted that in those surveys the actual divisions of property have not been shown in all cases, instead of the divisions which have been given upon the maps. In every case of the division of property by means of a bank and ditch, the bank and ditch must, of necessity, belong to the land which is on the inner side of

the bank, because the owner, who had to make the bank and ditch originally, had to dig the ditch and throw the bank up upon his own land; the outer edge of the ditch being the outer boundary of his property. Now, in such cases, and they are extremely numerous all over the United Kingdom, the Ordnance Surveyors have taken the centre of the bank as the line which they have shown upon their maps, and as the line up to which they have scaled in the quantities which are contained in their Books of Reference.

Of course, in cases in which the bank and ditch divide fields belonging to the same owner, no injurious consequence results from the course which has been adopted; but in every case where the external fence of a property belongs to the estate there is a strip of land, varying from three feet to six feet, in different counties, which belongs to the owner of the estate outside the line shown as the boundary on the Ordnance map. If this bank and ditch be against a public road, the extra quantity has to be added to the quantity shown as the area of the estate. If the adjoining property be the land of another owner, then the strip of land that belongs to the one estate has been measured and included in the area of the other. This, for practical purposes, as regards the use which Surveyors can make of Ordnance Surveys is to be regretted; but, of course, it is one which, with a little trouble, can be corrected. It is also unfortunate that the Books of Reference have been prepared by men who apparently do not know the difference between arable and meadow land. In my own parish of Woking, everything which is not woodland or houses and gardens is called arable land. My own meadows, on the banks of the river Wey, which certainly can never have been anything but meadow land for at least 500 years, are all put down in the Book of Reference as arable. This renders the Book of Reference, except as

regards quantities, a useless book, and it is difficult to see how this kind of error has crept into the work. I do not wish that it should be supposed that I undervalue the Ordnance Survey, or that I do not think upon the whole it is a creditable, nay, even a magnificent work. The Ordnance maps on a scale of six inches to a mile are perfect productions, because, at that scale, the little differences to which I have been referring are inappreciable. It is much to be desired that the Ordnance Survey should be completed within a short space of time, because the effect of that survey has been to extinguish the class of Surveyors who used to make maps for the Tithe and Parochial Assessment Acts, and it has therefore become very difficult in those parts of England where the Ordnance Survey has not been published to get a useful working map for private purposes.

As one matter of legislation which would affect beneficially English land, I would suggest that the time has arrived when all copyholds should be compulsorily enfranchised. This is possible under the existing law, in the event of either the lord or the tenant desiring to enfranchise; but my suggestion goes beyond that. I would render it compulsory, in cases where neither lord nor tenant desired the enfranchisement, to carry it out. The existing provision of fixing a rent-charge, in the event of the tenant not desiring to pay for the amount of enfranchisement in money, would be sufficient; but if my former suggestion, borrowed from the redemption of the tithe rent-charge in Ireland, should be acted upon or deemed worthy of adoption, the landowner might have the money lent to him upon a terminable payment, as has been already suggested.

In any event, much good would arise from at once abolishing copyholds. It would be one step in the direction which has been pursued in England for the last 50 years, namely, the making of land as free from encumbrances as

possible. It is a very remarkable circumstance, and one which shows how easily a little bit of adversity changes the purpose of practical people, that the legislation, which is now suggested in many quarters for the sake of the tenant, is diametrically opposed to this principle of freeing the land from every encumbrance. It is very possible that many of the advocates of what may be called tenant right, and compensation to the tenant for improvements upon land, lose sight of the fact that, if an outgoing tenant is entitled to be paid something at the end of his tenancy, an incoming tenant must also pay for those very improvements for which the outgoing tenant has been compensated: in other words, that a tenant going out of one farm and receiving compensation for improvements would have, if the law were universal, to make a similar payment on going into another farm, and thus would be deprived of all the benefit which would result from his compensation; and a tenant going into a farm who had not been in the position to receive compensation on outgoing would have to pay to the outgoing tenant a sum of money which, if not so paid, would be very useful to him in the work of his farm. The nearest approach, as far as any existing custom can approach the new proposal, is the custom of the county of Surrey, and that is a custom which has been condemned by probably as large a majority as three-fourths of the Members of this Institution. In my judgment, no legislation is required on this question of tenant compensation. The tenant is required to be a sufficiently practical man to make a bargain with his landlord, and the landlords at the present time, at all events, are perfectly willing to make beneficial bargains with their tenants. There is a lot of land in the market, and the tenant can at the present time suit himself with anything he may desire to have, practically upon his own terms.

Perhaps the circumstances of the present time have completely demonstrated the fact that all the land in England which is worth bringing into cultivation is under cultivation, and, indeed, the chances are that some of it which is in cultivation must, under present circumstances, go out of cultivation. A large outcry for cultivating the waste lands of England which was heard so much of a year or two ago has been silenced and put aside by the practical lessons of the present day.

Agricultural statistics have now for some years been obtained, but it is still an objection that they are but very imperfect. As long ago as the 18th of June, 1855, I addressed a letter to Lord Stanley of Alderley, who was then President of the Board of Trade, on the collection of agricultural statistics, and I suggested a plan which I then thought, and am still of opinion, would have answered perfectly well, and would have insured a proper and reliable return. My suggestion was as follows :—

"I would appoint a Surveyor-in-Chief at a liberal salary, whose whole time should be devoted to the duties of his office.

"Under him I would appoint Assistant-Surveyors, who should be located in districts.

"And to each Assistant-Surveyor I would allow a certain number of clerks, according to the size of the district and number of enclosures.

"Each Assistant-Surveyor must be supplied with plans of his district, which may be on a small scale, and which may be obtained from the tithe, poor law, enclosure, and other local maps, giving the number and quantity of each field.

"It is universally admitted that the first thing required, and indeed the very base of the whole operation, is to procure the breadth of land under cultivation with each particular grain during the year.

"What can be easier to obtain than this? Let us take only as an example one parish, and suppose it for the time in the hands of one of the Assistant-Surveyor's clerks.

"And this is the proper place to observe that my plan has the advantage of affording constant employment to all the working staff; it does not employ them for some three months in the year and then turn them adrift for the other nine. Such a system could never secure efficient men, because they could not give up a regular employment for three months, and the three months' employment on this could not maintain them throughout the year.

"To return to the Assistant-Surveyor's clerk. In the autumn he goes round the parish with a plan in his hand, and enters in a schedule he has for that purpose every field which is then sown with wheat; he may also note the fields of fallow and turnips—the doing so has this advantage; by it he will know where to look for a great deal of the barley land in spring. He can also enter the fields of stubble in which grass seeds are sown, and which will stand as clover in the current year, and may be taken as an index to some of the wheat land of the succeeding season.

"In the spring the lent corn can be taken into his schedule, and so on by harvest he will have procured the best statistical record possible.

"The only entry that is required to be made on the ground, in the first place, is effected by placing the quantity of the field, as shown in the second column, in its proper place in the columns of the respective cultivations; and should a field be in two or more crops, the Surveyor will have no difficulty whatever with the aid of his plan in approximately estimating the breadth of land under each.

"The following is the kind of Schedule proposed, which might be extended or elaborated in detail at pleasure:—

No. on Map.	Quantity.	Quality.	Wheat.	Barley.	Oats.	Beans.	Clover, Sainfoin, Rye Grass, &c.
	A. R. P.		A. R. P.	A. R. P.	A. R. P.	A. R. P.	A. R. P.
1	5 1 6	. .	5 1 6	. .	. .	. .	. .
2	9 1 2	. .	. .	9 1 2	. .	. .	. .
3	11 1 3	. .	. .	11 1 3	. .	. .	. .
4	5 1 4	. .	5 1 4	. .	. .	. .	. .
5	9 3 7	. .	9 3 7	. .	. .	. .	. .
6	6 1 2	. .	. .	. .	6 1 2	. .	. .
7	1 3 4	. .	. .	. .	1 3 4	. .	. .
8	5 0 8	. .	. .	. .	. .	5 0 8	. .
9	6 1 4	. .	. .	. .	. .	6 1 4	. .
10	3 1 2	. .	3 1 2	. .	. .	. .	. .
11	9 1 6	. .	. .	. .	. .	9 1 6	. .
12	10 1 3	. .	6 1 3	4 0 0	. .	. .	. .
13	11 1 9	. .	11 1 9	. .	. .	. .	. .
14	3 2 4	. .	. .	1 2 4	2 0 0	.	. .
	97 3 24	. .	41 0 31	26 0 9	10 0 6	20 2 18	. .

"The next consideration would refer to the quantity of land a clerk would examine in the year.

"Here I can speak from ample experience, having surveyed and mapped with my own hands, for the Tithe and Poor Law Acts, a district of parishes extending in one unbroken line a distance of forty miles, and embracing an area of some sixty or eighty thousand acres; and having also got up the references to those parishes—an operation much more troublesome than that of simply registering the cultivation, on account of the constant enquiries necessary to ascertain the real owner or owners. I have frequently referenced one thousand acres per diem; I have often examined maps of a thousand acres per diem, and I have even valued a thousand acres per diem; so that it is a very low estimate to suppose that a clerk would examine and collect the statistics of a similar area in that time. Suppose he has to go twice over the ground, and thus only completes five hundred acres per diem, it amounts to three thousand acres per week, and

assume his salary to be £3 per week, it will not work out a farthing an acre, after adding something for stationery.

"As far as ascertaining the breadth of land in each parish, under each particular cultivation, no doubt I have shown how it may be done. Now comes the somewhat less demonstrable but equally simple business of ascertaining approximately the amount of yield.

"This will devolve for the most part upon the Assistant-Surveyors themselves. In the first year they will have to settle the probable capabilities of each field on an average of years and under liberal treatment, and in subsequent years they will estimate, as the crops become developed, the probable yield above or below the average, and with proper allowance for any defective cultivation that may be apparent.

"Assume this work and the head office to cost another farthing per acre, and we have a total cost of one halfpenny per acre, for securing the most elaborate and trustworthy statistics on record, which time and experience may develop in the most minute and beautiful manner, and which may in the end be rendered subservient to the best interests of the country, and its rapidly improving agriculture; in addition to which would be organized a most intelligent and valuable staff of officers, whose services, covering as they would do the whole country, might be rendered available for many auxiliary purposes."

It is suggested that an alteration of the land laws in England is required, and in Ireland a good deal has been said about fixity of tenure. It is premature at the present time to make any suggestion with reference to a matter which may never take a practical course, but I should just like to suggest that any alteration in the law of entail, or in the law of settlement, will not beneficially affect the

position of the tenant farmer, nor touch any of the difficulties under which the landed interest is now suffering; and I want to put very prominently forward a hope that nothing will be done which should tend to prevent, or to retard, or check that great improvement of landed estates which has been going on throughout the whole of my professional career, and which one would hope may still go on when the present clouds of adversity have blown over, if not prevented by legislative enactment.

But if anything is done either in England or in Ireland to give the tenant an interest in the land which cannot be terminated at the will of the landlord, a very great hindrance upon the improvement of estates will be created thereby, and such a hard hit will be dealt upon landed property as will very materially reduce its value. A well-devised scheme for facilitating the transfer of landed property is much to be desired, and, if the proposed reform of the land laws only goes to that extent, much good, and no harm, will be done.

Twenty-nine years ago I made a suggestion on this subject, which I will now repeat. It was as follows:—

"I would establish one general office, in or near London or Westminster, to be called 'The Land Register Office'; to conduct such office I would appoint all necessary and suitable officers, and therein should be kept a duplicate of every document relating to land throughout the kingdom. I would then divide England into districts of convenient size, and I will assume, for the sake of my present purpose, that the boundaries of the several poor-law unions are the most suitable divisions for such districts.

"I would next establish, in or near to the centre of each union or district, a 'district register office'; to conduct which district office there should be appointed two superior officers, the one a barrister or attorney of sufficient legal

competency, the other a capable Land-Surveyor, who had been a certain number of years in practice, and had executed with his own hands such an amount of professional work as would qualify him for the duties required of him.

"The next essential to the development of my scheme would be an accurate map of the district, on a scale sufficiently large to admit of the delineation of every feature existing upon the surface of the ground; upon this map each separate piece or parcel of land or property should be numbered, and referred to in a book of reference, which would then become the register, in its simplest form, of the real property of this kingdom, and would contain in one line every particular relating to the title of each separate particle of it.

"Now it may be asked, How can such a register be obtained?

"The maps must, of course, be first prepared; then I would render it incumbent upon every owner, within a specific period, to come in and register his property; the legal officer would examine into his title, and ascertain that in all probability the person so proposing to register is the owner of the property; the Surveyor would identify the property on the map, and duly register it in the reference book, and, in the event of no second application being made for registration of the same property within the limited time, such registration should become its legal title; the owner should be furnished with an extract of the plan and register book, so far as relates to his property, and all other deeds and documents might then for ever be rendered unnecessary.

"In the case of disputed titles, or in cases in which registration of the same property might be demanded by two claimants, some means should be provided either by a Royal Commission, such as the 'Encumbered Estates in

Ireland Commission,' or some similar machinery for deciding at the earliest possible period upon the questions in dispute; meantime the Act, so far as regards those properties, must remain in abeyance; but that decision, when arrived at and registered, should be final, and in every respect as though there had been no disagreement.

"In like manner, no legal title should pertain to a mortgage, or other interest in or encumbrance on land, unless registered within a certain time. Some few difficulties of detail would doubtless arise, but none of them insuperable, and, when complete, this register of landed property might be the most simple thing in the kingdom.

"Now let us see how it would work: suppose A is desirous of disposing of his estate, and B agrees to purchase it for a certain sum of money—the two parties repair to the registry office; A produces the extract of the register furnished him on registration, the legal officer identifies A therewith, the Surveyor identifies the land, B acknowledges his inclination to purchase; if there is any encumbrance upon the land it is pointed out to him; he pays A the purchase-money, A signs an endorsement on the extract of the register, and hands it over to B; B becomes the registered proprietor of the estate, and the parties leave the office, having paid such fees as it may be deemed expedient to charge them under the Act, and the negotiation, having occupied but few hours, or a few days at most, is at an end. Had the estate been mortgaged, no fraud could follow, as it would be the duty of the officers at the registration office to point it out to the purchaser before the consideration money was paid, and, therefore, as a matter of course, the mortgagee would be one of the parties whose attendance would be required, when he would either be paid the amount of his mortgage, or the purchaser would buy the land, subject to his claim remaining upon it.

"So it would be with a person wishing to borrow money upon the security of land. The mortgagor and mortgagee would repair to the office together; the extract of the register, referring to the land proposed to be mortgaged, would be produced; it would be explained by the officers if there were any prior mortgages: an endorsement would be made on the extract of the sum borrowed, and an entry made in the register; the money would be handed over; the mortgagee would receive a certificate of the registration, and so the greatest security would be obtained.

"It may now be asked how I would manage in a case of a division of an estate, supposing there were no existing fence to mark out the boundary? In such a case, notice should first be given at the registration office that a division was intended, and an appointment made with the surveying officer for him to attend on the ground; the vendor and purchaser should point out the limits of the land sold; the Surveyor should make a correct survey, and delineate the new boundary on the map; the parties should attend at the office; the original extract of register should be cancelled; a new one given to the purchaser of the portion he has purchased, and a new one to the vendor of the remaining portion of the estate; the money being paid as before, the respective parties could leave the office in possession of their separate estates.

"To enumerate the whole of the cases that might arise would be tedious, and unnecessary for the object I have in view; as I have already observed, sundry difficulties might occur in carrying out matters of detail, which would have to be provided for; those who entertain objections to registration, on the ground that it would involve an exposition of private affairs, may be assured it is no part of my plan to permit an inspection of the register *ad libitum:* the officers would be bound to secrecy as in a bank, and only those

interested should be permitted, upon production of their extracts of the register, to obtain any information, and then only so much as relates to their own property, so that greater privacy might prevail than at present exists.

"Among the advantages which I imagine would be derived from the adoption of this plan, I beg to submit the following as examples :—

"The identity of properties would be established, and the boundaries clearly defined.

"The necessity for long title-deeds would be obviated by the substitution of an extract from the register.

"Perfect simplicity would be attained.

"Expense would be saved.

"Fraud would be prevented.

"All the advantages pointed out by the advocates of other schemes would be secured;

"And land would be enhanced in value to a very great extent."

The Report of the Royal Commissioners on Agriculture has not yet been made; but a subsidiary Report by Messrs. Read and Pell, on the results of their investigations in America, has been published. It contains a very large amount of valuable information, and a copy of it will be found in the Library. The facts set forth in it are, we are assured, thoroughly reliable. It appears to me that so much cannot be said of everything which the English farmer has been invited to read in the public prints. It has very much astonished me to see the sources from which some of the published information has been collected. Communications have appeared from men very able in their way, but whose experience is, to say the least of it, limited upon the subjects about which they have written. One great lesson which the English farmer should learn from the present crisis is self-help. He must educate himself sufficiently to

enable him to judge between the information which is likely to be really useful to him and that which may be misleading.

It appears that the conclusions at which Messrs. READ and PELL have arrived concerning the American competition are as follows: "(1) That America is no paradise. (2) That in the contest for agricultural supremacy, while fresh unexhausted soil, a level surface, and the absence of stones are highly favourable for the profitable use of modern machinery and the manufacture of grain, by a scourging course of cropping, still, drawbacks exist which tell in favour of the old country, viz.: (1) Severe winters, putting a stop to agricultural employment. (2) Dangerous droughts. (3) Injurious insects, and (4) in the prairie land (in the absence of lakes) a short supply of good water."

This is not a very definite conclusion one way or the other. If, however, it does not entirely reassure us, it encourages us not to despair. Perhaps at this time next year those of us who may be spared to meet here again may have been able to read the full Report of the Commission, and interpret the significance of the facts as regards America by the light of the more perfect and general information which that Report will probably contain.

I cannot conclude my Address without referring to a new departure which has been taken by this Institution in the direction of Professional Education. The Council, having given great consideration to the matter, have succeeded in elaborating a scheme rendering it obligatory upon Students of this Institution to subject themselves to a Preliminary and Proficiency examination. A Board of Examiners has been appointed; but the scheme has only just been put into operation, and it is too early therefore to predict results. The first examinations will take place in January, and a considerable number of candidates have

already sent in their names. Large hopes are entertained concerning the ultimate good which this scheme may work out for the profession, but, like the Agricultural Commission, it would be a little premature to discuss it on the present occasion.

The Council have, during the past year, taken another very important step, intimately associated with the educational scheme, from which much good is expected to result. In accordance with a resolution which was passed by a Special General Meeting in July last, a Petition has been drafted for a Royal Charter, the time having arrived when, in the opinion of the Council, this Institution is at a little disadvantage among the other professional Institutions of the Metropolis (most of which are incorporated by Royal Charter), until it is placed on an equal footing with them in this respect.

I trust that, in laying before you my personal views, I have succeeded, as far as possible, in avoiding all topics in the nature of political controversy, which are necessarily and properly precluded here. I have made several of the suggestions which have been introduced with a view to stimulate discussion at subsequent Meetings. This leads me to observe that promises of Papers have been made upon various subjects, among which are included :—The Law as affecting Quantity Surveyors ; Rural Water Supply ; Sanitary Surveying ; Ecclesiastical Dilapidations ; Construction of Farm Buildings ; The Rating of Fixtures ; Farm Accounts ; Rights of Fore-shore ; Land Law Reform ; and other subjects.

Mr. H. J. Castle, Senr. (Member), had great pleasure in proposing a vote of thanks to The President for his able Address, with every word of which he entirely concurred.

He trusted that many of the topics for discussion

suggested in the Address would form the subjects of future Papers, and be the means of eliciting information useful for the Members.

Mr. Lumley Smith, Q.C. (Associate), rose with great pleasure to second the proposed vote of thanks. He was sure they must all feel exceedingly obliged to The President for having found time, amid his many occupations, to put on record his views on so many subjects of interest.

He could not refrain from adding a word or two with reference to the Committee on Metropolitan Water Supply, and the part taken in the investigation by the late Mr. Edmund James Smith.

In that remarkable enquiry, upon which was brought to bear the ability of many Government officials, barristers, and gentlemen of great eminence in various scientific professions, the universal opinion was that the talent, activity, and courage with which Mr. Smith defended his opinions were well worthy of his great reputation.

He could further say that this opinion was, by degrees, becoming shared even by those who were at first so ready to criticise and attack him.

The President briefly acknowledged the vote of thanks, and repeated that many of the subjects with which he had dealt were touched upon for the purpose of provoking future discussion, and he trusted that the result would be to elicit Papers upon some of them in the course of the Session.

Before he sat down, he had the pleasure to inform the Members that Mr. R. C. Driver had generously announced his intention to place an annual sum of £25, for two years, at the disposal of the Council, to be bestowed in prizes in connection with the education scheme; and that Mr.

D. Watney had also kindly offered a sum of £5 as a "proxime accessit" prize for the same object. He begged to move that a hearty vote of thanks be passed to Mr. Driver and Mr. Watney for their liberal offers, which the Council had accepted.

The vote of thanks was then put, and carried by acclamation.

The Meeting then adjourned.

No. 91.]

THE LAW AS AFFECTING QUANTITY-SURVEYORS.

By FRANCIS TURNER (Associate)
(*Barrister-at-Law*).

Read at the Ordinary General Meeting of the Institution of Surveyors, *November 22nd*, 1880.

THE PRESIDENT IN THE CHAIR.

In the very ancient and interesting "Boke of Surveyinge, compyled sometims, togither with other small bokes very necessary, by Master Fitzherbarde," who was at once a skilled Surveyor and an accomplished lawyer, the learned and eminent author states that he has written upon husbandry "for the great zeale, love, and comforte that he bears to fermyours and tenauntes, and to all other Goddis creatures, that they maye more surely, easyly, and profitably encrease and susteyn their poore housholde, wives and chyldren." Having thus evidenced his concern for "fermyours and tenauntes," he "demaundes another question, which is this;—how, and by what maner doo all great estates and noblemen and women lyve and maynteyne theyr honour and degree?" The answer is rather a long one, but its sum and substance, its gist and essence, is contained in the sentence, "wherefore it is necessary, that every great estate, both men and women of worshyppe, that have great possessions of landes and tenementes, should have a Surveyor." It is needless to dwell upon the thousand and one good reasons for this most sound and comfortable conclusion. They will most readily and most

forcibly occur to those with whom a Surveyor's onerous and difficult duties are matters of daily and hourly experience. Enough to tell that Master FITZHERBARDE strongly insists upon a happy mixture of moral rectitude with mental "skill and cunning" as essential for the profession in those early days; and assuredly the same qualities are not less necessary, now that modern tendencies towards divided labour have both created and satisfied the demand for that class of specialists whom we know as Quantity-Surveyors, and who, like the Surveyors of FITZHERBARDE's time, "should have some insight and experience of the Common Lawe," especially of that part which most closely affects themselves.

In Mr. SHIRESS WILL's edition of WHARTON's Law Lexicon, a Surveyor is defined as "one who has the overseeing or care of another person's land or works." If asked to perform what, in this Hall, may be regarded as a work of supererogation, I should define a Quantity-Surveyor as one employed to ascertain, by the oversight of another's project for buildings, or other constructive works, the quantities of material, and of certain kinds of labour, required for their accomplishment. As a distinct and independent vocation, the profession is so nearly of yesterday, that a much respected Member of this Institution is often described as "the Father of Quantity-Surveying." And yet the first chapter of Master FITZHERBARDE's book presents us to the remote ancestors of the art and mystery. He cites a Statute of the first Edward under which it is to be enquired "of castelles and other buyldinges how much their tymber, stone, lead, and other manner of coverynges is worthe, and how they may be solde, after the very value of the same walles and byldynge," supposing the same to be pulled down and disposed of piecemeal; "that is to say, the stone wall of one house by itselfe, the tymber by itselfe, the covering by

itselfe, the tyle, sclate, or leade by itselfe," and so on to the end of the catalogue, properly to compile which would require the Quantity-Surveyor to have been most beneficially employed upon every line, for, presumably through his "skill and cunnynge," a man might then "make a castell or towre . . . . and finish it clerely . . . yet if he shulde go take it downe, and selle every thinge by itselfe againe, he shuld lose" [only] "the more halfe his money," a much smaller modicum of loss than would follow a similar experiment in our time.

The Quantity-Surveyor of to-day will hardly confess kinship with archaic predecessors "who were busiest when castelles and other buyldynges" were doomed to destruction, since he is chiefly wanted when a man who desires to build a house, sits down to count the cost, whether he will be able to finish. The endless and ever-increasing details of extensive building operations have made such preliminary calculation a work of immense labour, which the architect is generally unwilling—which many builders are but indifferently qualified—to undertake. And to fill the gap, the Quantity-Surveyor came into separate existence; not, indeed, in any determinate and formal way, but by a process of Natural Selection, in the course of which, the architect or Surveyor who had the best head for figures, developed, by "Survival of the Fittest," into the Quantity-Surveyor pure and simple. This separation, like that which now obtains between the two branches of my own profession, though now sufficiently pronounced, was gradually and almost imperceptibly accomplished. The builder originally estimated quantities for given works in a rough and ready way, by memory and the rule of thumb, with results neither more nor less satisfactory than generally attend that process, until, in course of time, the Quantity-Surveyor had vindicated his *raison d'être*. Having done so, what are

his obligations, responsibilities, and remedies? To whom does he owe the one, and from whom must he, under given conditions, seek the other?

His obligations may be briefly summed up. Like every one who professes to practise a craft, vocation, or profession for gain and reward, he must bring thereto a competent degree of knowledge, which he must exercise with reasonable care and skill. Again quoting our old friend FITZHERBARDE, "Ignorance of cunnyng, or of the facultie in hym that taketh upon hym as a master of the science or cunnyng, excuseth nat a man's offence; for every man that God hath sende wytte and reason unto, is bounden to knowe, whether he do well or yuel." The requirement of competent knowledge and skill has all the merits and all the demerits of general rules. It is so true that no one can dispute it, and so vague that no one can determine whether a particular case comes within it. In other words, it is a question of fact for the jury, to be decided on a consideration of the nature of the work, the circumstances of the case, the experience of the Surveyor, and the representations he may have made as to his own qualifications. He is not bound to reach the very highest standard of professional excellence, any more than every painter is bound to be a Sir JOSHUA REYNOLDS, every surgeon a Sir HENRY THOMPSON, or every lawyer a Sir WILLIAM FOLLETT; but he is bound to possess a reasonable amount of natural capacity, and to have cultivated his powers with reasonable diligence.

The obligation as to care and skill in the performance of a particular work, must be stated in very similar terms. It is, of course, open to any Quantity-Surveyor to warrant his quantities, vouching their absolute accuracy, and undertaking to make good the loss which any inaccuracy may occasion to builder or building-owner. But, in practice, I

believe such warranting is very rare, and I should doubt whether it is ever advisable. In every set of plans and specifications there will be many items, which different persons will differently construe, and as to which the Quantity-Surveyor must exercise a certain amount of discretion. He must not be a mere measuring and calculating machine. He is bound to take out his quantities as a great painter mixed his colours—"with brains;"—to bring his knowledge of architectural detail, and of the properties of different materials, to bear upon the work in hand. Even in carefully-prepared plans and specifications, there will be occasional ambiguities and inaccuracies, for which the Quantity-Surveyor must make allowance on one side or the other. And when he has done his best and his utmost, there will remain the inevitable residuum of mortal frailty, which will crop out somewhere and somehow, when the work in hand necessitates hundreds or thousands of minute calculations. *Humanum est errare;* but the point at which the error ceases to be venial, and becomes evidence of lack of reasonable care and skill, is, like lack of reasonable competence, a question of fact for the jury.

On this point, too, precise definition is the more impossible, because, while competence may be with each individual something like a fixed quantity, the measure of care and skill may be affected by many circumstances. The materials provided for the Quantity-Surveyor may consist of plans hastily drawn, or more hastily adopted from other buildings in which they have already done duty; they may have been finished without proper care, or perhaps not finished at all; some portions of them may involve structural differences of which no sufficient account has been taken; the specification may be loosely and inadequately worded, and the time between the first instructions and the day on which the Bills of

Quantities are to be ready for the builders may be entirely insufficient. When asked to work under such conditions, the quantities should form part of the contract, as then the building-owner will not have to pay for what he does not get, nor will the builder have to supply anything for which he is not paid. It may be said that such a course tends to make the Quantity-Surveyor careless, and consequently to injure the profession by lowering its standard of excellence. This may be so when the materials and time are both sufficient. But in the case I have put, I should advise making the quantities a part of the contract by every Surveyor who would make himself safe, for when a building or aught else fails to fulfil expectations, often unreasonably entertained, it is so much pleasanter to blame somebody else than one's self, that the building-owner who has unduly hurried on the work, or otherwise made proper exactitude unattainable, is precisely the man who is most likely to find fault with the consequences of his own mistakes, and attribute them to the Quantity-Surveyor's negligence. The circumstances which may or may not constitute actionable negligence may perhaps be illustrated by reference to similar charges against solicitors. It is not negligence for a solicitor to have formed a wrong opinion on a difficult point of law, to have made a mistake on a matter about which there was a reasonable doubt,* or even to have fallen into what may be called a cautious man's error ;† still less is he liable for the mistakes of a competent counsel, or for an event so extraordinary and improbable as the absence of a counsel whom he had instructed. But he would be liable if he took proceedings against an apprentice under an Act applicable only to domestic servants,‡ or if he omitted to make proper searches for encumbrances

* *Kemp* v. *Burt*, 4 B. & Ad. 424.

† *Montriou* v. *Jefferys*, 2 C. & P. 113.

‡ *Purves* v. *Landell*, 12 C. & F. 91 ; *Hart* v. *Frame*, 6 C. & F. 193.

on property on which his client was about to lend money on mortgage.

In addition to reasonable competence, care, and skill, the Quantity-Surveyor, like all other persons in confidential capacities, is bound to the strictest good faith and the highest honour. This obligation I should have dismissed in a sentence, but for some observations made by Mr. Eve, when Quantity Practice was under discussion in April last, from which it would appear there are at least some Quantity-Surveyors who have fallen victims to what Mr. Justice Field has described as "the canker which has of late years, eaten into the soul of commercial morality." I allude to those passages, in which that gentleman spoke of charges for lithography, multiplying the real cost many fold; of quantities "loaded" with a fancy price for abortive plans; of "the privilege of tendering," purchased by adding a percentage to the contract, which builder or building-owner must pay. I waste no words in proving that any such deflection from the straight line of duty is forbidden, alike by the law of the land and by those higher laws of morality which cannot be violated without damaging the man's moral tone to an extent, for which sordid and ill-gotten gain is a poor and miserable compensation. He who weakly or thoughtlessly yields to such temptation may be made painfully conscious of his mistake by the tempter's subsequent assertion of power incident to the possession of a guilty secret. It cannot be too clearly understood that decision after decision has firmly established the doctrine that all profit, secretly made by a confidential agent, belongs to the principal, even when he has suffered no actual damage from its improper receipt;* while, if damage

* *Bentley* v. *Craven*, 18 Beav. 75; *Richie* v. *Cooper*, 28 Beav. 344; *Mossey* v. *Davies*, 2 Ves. 317; *Tyrell* v. *Bank of London*, 10 House of Lords' Cases, 26; *Holden* v. *Webber*, 29 Beav. 117; *Harrington* v. *Victoria Docks Company*, L.R. 3 Q.B.D. 549; *Smith* v. *Sorby*, Ibid., 552 n.

does result from any such bargaining as that suggested by the facts to which Mr. Eve alluded, neither judge nor jury, when dealing out the penalties of actionable wrong, will weigh in golden scales the sum payable by the highly-qualified and implicitly-trusted agent who has thus betrayed his trust. The cases in which Quantity-Surveyors have laid themselves open to this reproach are, happily, few and far between, but the fact that some such have occurred, sufficiently shows the necessity of resolute resistance to the beginnings of so insidious an evil.

These, then, are the Quantity-Surveyor's obligations. Let us now pass to his rights and his remedies.

As to these, I must regretfully admit that there are some points on which amendment is greatly to be desired. When the Quantity-Surveyor is employed and paid directly either by building-owner or builder, the matter is simple enough. To his employer only is duty due, and by him only is fee or reward to be paid. The building-owner employer cannot complain of mistakes which only harm the builder, nor can the builder complain that his Quantity-Surveyor has erred to the detriment of the building-owner. But I believe such direct and separate employment is not the rule, but the exception. The Quantity-Surveyor usually comes upon the scene thus:—The building-owner selects his architect, giving him his rough idea of what he wants, and the price to which he means to go. If the work is to be done by contract, the architect, having prepared his plans and specifications, hands them to the Quantity-Surveyor; thus acting, as is generally understood, as agent for, and on behalf of, the building-owner. At this point then, the Quantity-Surveyor is working for a principal whom he has never seen, who is probably ignorant of his name, and has the mistiest possible notion of his calling. Yet, at

this stage, the Quantity-Surveyor is on his firmest vantage ground. He has done his work for a known and responsible employer, who may abandon his scheme, and put the bills of quantities in the fire. If he does so, the Quantity-Surveyor is in clover, and the building-owner's liability is undeniable. This was decided in 1837, in the well-known case of *Moon* v. *The Guardians of the Witney Union*,* where the plaintiff had prepared bills of quantities, to be paid for by the successful competitor for the erection of a proposed new workhouse. Defendants and their architect quarrelled; they refused to go on, and hence there was neither competition nor successful competitor. At the trial, the jury found that a usage existed by which the architect was justified in employing the Quantity-Surveyor, and that it was beneficial to all parties, as indeed the defendants admitted. But they contended that they were not the people to pay, and that, the matter having gone off, the Quantity-Surveyor must remain unpaid. The Court, however, held that as, by the defendants' default, there had been, and could be, no successful competitor, they must pay for the work which had been done, in their interest, and by their authority.

Supposing, however, that a tender is accepted, and a building contract signed, the contract with the Quantity-Surveyor shifts from the building-owner to the builder. This custom appears to have been so well established when *Moon* v. *The Witney Union* was decided that neither party endeavoured to dispute it; Chief Justice Tindal interpreting the contract as a conditional one, under which the plaintiff was to be paid by the successful competitor, if there were any. The decision has repeatedly been cited and followed in trials at Nisi Prius, but it is always desirable to

* 3 Bingham, New Cases, 814.

vivify the fossil of the report by *vivâ voce* evidence that the custom there mentioned is still recognized as binding by all parties concerned. I am not aware, however, that the authority of the case *on this point* has ever been questioned in England. It was very recently followed in Ireland, in the case of *McConnell* v. *Kilgallen*,* though somewhat doubted in *Taylor* v. *Hall*,† at least, without confirmation by evidence of custom given at the trial. This wavering on the part of the Irish Bench with reference to a question long supposed to be settled is unfortunate, as weakening the effect of a decision by a Court in Banco, affirming a valid and reasonable custom.

Assuming, however, that *Moon* v. *The Witney Union*, if not absolutely conclusive as an authority, is of so much weight that, in a parallel case, slight evidence in accord with it must be rebutted by stronger evidence in opposition than is likely to be forthcoming, it fails to cover the whole of the ground which the Quantity-Surveyor would like to make his own. In practice, when all runs smoothly, the money comes to the Quantity-Surveyor by the builder's hand, but from the building-owner's pocket. The builder is not only at liberty, but is generally required, to include the cost of the quantities in his tender for the works. Very frequently also, the contract provides that the Quantity-Surveyor shall be paid out of the first sum for which the architect certifies; and, whether this be so or not, it would seem, alike from *McConnell* v. *Kilgallen*, and from the general rule of law, that, when no term of credit for work done or goods sold is fixed by contract or custom, the price is payable forthwith. Every Quantity-Surveyor, wise in his generation, will act upon this rule, the more so because, if he good-naturedly refrains from pressing the builder who

* 2 Irish L.R. 119, 2 B. D. (decided 1878).
† 4 Irish L.R.C.L. 467 (decided 1869).

has not received the price of the quantities, he will run the risk of losing the reward of his labour altogether. For, granted that, when the building contract is signed, the Quantity-Surveyor's contract shifts from building-owner to builder, and granted also that, as soon as it has so shifted, the Quantity-Surveyor can sue the builder, the *prima facie* inference is that it so shifts at once, unconditionally, and for all purposes. If so, the remedy against the building-owner is gone for ever.

But this rule, which looks so charmingly legal, may, under certain circumstances, impress minds not perverted by superabundance of technical learning with the belief that it is the very reverse of equitable. In one case, a builder had contracted upon quantities carefully prepared, and of which the building-owner had the ordinary benefit when making the contract. Payments were made on account; but, as from them the quantities were carefully excluded by the special direction of the building-owner, the Quantity-Surveyor had not the heart to press a man who was hard up, to pay the money out of his own pocket. The builder went into liquidation, having received several hundred pounds within the certificate margin, but neither circumstance was deemed sufficient to entitle the Quantity-Surveyor to recover from the building-owner. Apart from custom, such a ruling is perfectly right, and the case is, I should imagine, of sufficiently frequent occurrence to have become the subject of a well-recognized custom to the effect that the shifting of the contract from building-owner to builder, is subject to the further condition that the former remains liable until he pays the latter. Some evidence to this effect was given, but not enough to satisfy the judge who tried the cause. Should such a question again arise, it might be possible to fortify the evidence in support of a custom which has both justice and reason to recommend it.

If, however, the "shifting at once and for ever" doctrine is to be accepted as the true one, the building-owner is in the happy position of having been helped to make a beneficial contract by a highly-trained professional assistant, to whom he is not bound to pay a penny. To make the case still harder, the more care the Quantity-Surveyor has taken of the building-owner, the greater the probability that he will get nothing for it. The proposition may sound startling, but it is true nevertheless. Among competing builders, the lowest tenderer is often financially the weakest, and to him, therefore, payment for quantities out of his own pocket, before the building-owner has paid him, would involve difficulty in meeting the more imperiously-urged demand of the British workman on Saturday afternoon. The Quantity-Surveyor knows this, and does not like to grind the face of the poor. He hopes, and waits, till the works stop; a state of things the more likely to occur if the Quantity-Surveyor has so done his work as to leave little room for contingencies in favour of the builder, to whom a plus of five per cent. may make all the difference between pulling through and pulling up. The rigorously faithful Quantity-Surveyor saves this five per cent. for the building-owner. The builder fails before paying for the quantities, and he has to put up with a dividend of nothing in the pound, while his professional brother, who is more lax or more indulgent than himself, gives the margin, which enables the builder to hold on, and eventually to pay him his money. I assume these typical Surveyors to have acted in equal good faith, but that while one has only given the builder his pound of flesh, the other has allowed a few drops of blood and a little over-weight to be thrown in. It is more than anomalous to know that a very simple application of the doctrine of probabilities shows that, in the

former case, the chances are that virtue will have to be its own reward.

Still, all things have their compensations, and it would seem that, if the building-owner is to claim the benefit of non-liability to the Quantity-Surveyor, the latter may fairly disclaim the burden of responsibility to him. Liability for negligence may arise either from duty or from contract: from duty, as when a driver on the Queen's highway runs over a fellow subject lawfully using the same; from contract, as when a man is employed to do something for which he expects and is entitled to be paid by his employer. The obligations of a Quantity-Surveyor do not arise from duty, for there is no Common Law duty binding any man to set himself to the head-aching work in which a Quantity-Surveyor spends his life. They must therefore be founded on contract, and a contract which presupposes reward. If, therefore, the contract shifts from building-owner to builder, as soon as the contract is signed, the responsibility should shift with it. That the builder cannot sue the building-owner for inaccuracy in the quantities, was decided in *Scrivener* v. *Pask*,* where a builder failed in an endeavour to make the owner liable for inaccuracies in the quantities, which had involved him in serious loss, though he might well have maintained an action against the Quantity-Surveyor, whose fees he has paid. On analogous principles, the defendants in *Thorn* v. *The Mayor of London*,† were held not liable to the contractor for Blackfriars Bridge, because a certain specified and economical mode of construction was found impracticable. The builder, who pays the Quantity-Surveyor for his work, has a good cause of action against him if the work

* L.R. 1 C.P. 715.

† L.R. 9 Ex. 163, 10 Ibid. 112, 43 L.J. 115 Ex.

be badly done and injury to him consequently ensues. But who is to sue when every mistake is in the builder's favour? Not the builder, for he is not only not damnified, but directly benefitted. Not the building-owner, for as, against him, the Quantity-Surveyor has lost his rights by the shifting of the contract, he can have no cause of action upon a contract to which he has ceased to be a party. His position is like that of a creditor, Smith, with a valid claim against Jones, who, in turn, has an equally good claim against Robinson; whereupon all parties agree that Smith shall accept Robinson as his debtor in the place of Jones, who shall thereupon release Robinson, and, in turn, shall be released by Smith. Thenceforward, to use a colloquialism, Jones is "out of it," and Smith and Robinson must settle matters between them. Jones, it will be seen, is the middle term of our present proposition: in other words, he is the building-owner, who has assented to the transference of his own pecuniary liability to the builder, and so has become a stranger to the contract. He does not warrant the accuracy of the quantities or the practicability of the work.* It would therefore be anomalous in the extreme, if, being neither liable to the Quantity-Surveyor, nor responsible for him, he could maintain an action against him. He would be like the plaintiff who sued the solicitor whom a testator had employed to make a will by which he would have largely benefitted, had not the solicitor unluckily made a mistake in the execution which rendered the will inoperative, but who failed in his suit,† because the solicitor had never contracted with him.

While admitting the persuasive equity of this view, I am bound to admit that something is to be said on the

* *Scrivener* v. *Pask*, L.R. 1 C.P.; *Thorne* v. *Mayor of London*, L.R. 9 Ex. 163, 10 Ibid. 112, 43 L.J. 115 Ex.

† *Robertson* v. *Fleming*, 4 Macqueen's Scotch Appeals, 177.

other side. Among the many advantages of an elaborately-developed system of jurisprudence, is that of being able to find conflicting tendencies in various decisions on many questions, the present included. Thus, in bailments and other employments involving trust or confidence, the very reposing of such trust is a consideration sufficient to support a contract to perform the duty or trust which the law will imply as against the bailee or trustee. In the well-known case of *Coggs* v. *Bernard*,* the defendant, who had gratuitously undertaken to store a cask of brandy, was held liable for leakage caused by careless handling; in *Wilkinson* v. *Coverdale*,† a gratuitous promise to effect a fire insurance, made the defendant liable for neglect to insure before a fire broke out; and in *Doorman* v. *Jenkins*,‡ a coffee-house keeper had to make good a sum of money which a guest had entrusted to his care, and which was stolen from a drawer in which he had negligently left it. Another case, that of *Montriou* v. *Jefferys*, || in which a solicitor, acting for borrower and vendor, but paid by borrower only, was held liable to the lender for taking an insufficient security, may be supported on the ground that the defendant was really the lender's solicitor, though, by custom, his costs were payable by the hand of the borrower; and would have been so even if the borrower had been separately represented.

To sum up—the Quantity-Surveyor's legal position is as follows:—His obligations are reasonable competence for his work; reasonable care and skill in his work; and the highest honour in the performance of his work. Employed by the building-owner, through the architect, who, for this purpose, is the owner's agent, his remedy is against

* Ld. Raymond, 909; 1 Smith's Leading Cases, 7th edit., 188.
† 1 Esp. 74.
‡ 2 A. & E. 256.
|| Q. C. & P. 113 p., Abbott L. J.

the building-owner up to the signing of the builder's contract. When this has been done, he may sue the builder for his fees, unless he has agreed to wait till the building-owner has provided funds for the purpose; but, if he waits till the builder has failed, he cannot, in the absence of contract or cogent evidence of custom, recover from a building-owner, who has had all the benefit of his work, and has paid neither builder nor Quantity-Surveyor for it. This hardship is somewhat mitigated by the probable, but by no means certain consequence that after the builder has signed the contract, the Quantity-Surveyor is liable to him alone; though the proposition, that such a building-owner may maintain an action for negligence in doing work for which he is not bound to pay, is fairly arguable. Whether it is or is not ultimately sustainable is probably of interest rather as a legal moot than as a practical point, for the profession would not desire to shelter itself from any responsibility that may, in moral fairness, rest upon them. And I should think it would be quite possible for the Council of this Institution, either alone or in conference with architects, builders, and others practically conversant with the subject, to frame a set of rules which might be so incorporated into every contract as to free the profession from any cause of complaint as to the legal position of Quantity-Surveyors.

In conclusion, I have to thank the Members for placing this evening at my disposal, and to express my hope that the cordial relations between our professions, of which Master Fitzherbarde's Boke is such good evidence, may endure as long as the professions themselves shall preserve their names and places in our social and political system.

Mr. C. K. Bedells (Member) had great pleasure in moving a vote of thanks to Mr. Turner for his admirable

Paper, in which he had proved himself familiar with the details of a considerable branch of the Surveyor's profession. Formerly, there were very few members of the bar who knew much about the subject. He (Mr. Bedells) had been concerned in a case which was tried some twenty years ago in the Guildhall, when a member of the bar (now on the judicial bench) and a number of other counsel, seemed to have very vague ideas of the difference between specification and quantities, and in fact, used these expressions over and over again as interchangeable terms. Three or four witnesses had been examined in the case, and it seemed to be in a hopeless fog, when he (Mr. Bedells) ventured to ask Lord Campbell to allow him to explain the difference between quantities and specification. Having done this, there was smooth sailing, and the case went on to the end. Now, it was quite certain that no analogous confusion existed in Mr. Turner's mind, and he thought the Paper had thrown great light on the legal liabilities of Quantity-Surveyors.

For his own part, he considered it very desirable that the priced bills of quantities should be made into schedules and used as evidence of what the contract really contained, so that, if not signed as part of the contract, they might be referred to as evidence in settling up accounts. It had been his own practice, for some time past, to ask the builder to deposit his priced bills of quantities, and in settling up accounts always to refer to them. Should there prove to be a trifling inaccuracy, he had never known a client unwilling, on a fair representation of the matter, to permit a rectification.

He had always inserted in the quantities a provision, to the extent of, probably, 5 per cent.—never exceeding that amount—for the purpose of meeting any little inaccuracy that might arise, always explaining the fact to his client; any

part or the whole of such provision if not required is fairly credited to the employer, and in no case that he remembered had he been asked to make good any deficiency. In one instance there had occurred a slip in abstracting. The effect might have been to mislead his clients as to the extent of the outlay, but this was the only damage they could possibly have sustained; and he offered to take shares in the undertaking to the small amount involved. His offer was accepted, and so the matter ended. But the reason he advocated making the quantities evidence in the matter of settling up accounts was that it so greatly facilitated the settlement. Cases were common enough in which builders took contracts at prices which were unremunerative, in the hope of getting a large profit on alterations or extra work in the settling of the accounts. That was a system which he should never wish to encourage; and if the priced quantities, as schedules, were made evidence, and were referred to as such, the items on which differences of opinion could arise were reduced to a minimum, and all cavilling over many small items was avoided. He believed that this system would work for the benefit both of employer and builder. An immense amount of litigation would thus be avoided, and a check would be given to what he might call dishonest, or, at any rate, unfair tendering; for a man aware that his priced bills of quantities would be taken as a basis in settling up the accounts would take care to send in a fair tender.

Now, whether it were the case or not that the Quantity-Surveyor was responsible to the building-owner, he thought there was no Surveyor who would wish to avoid the general liability which attached to every skilled profession for want of care and accuracy.

The author had referred to some remarks which had been made on a former occasion as to items which had been improperly put into the quantities for the purpose of swelling up the cost. For his own part, he had no experience of such practices, nor did he believe that they prevailed to any appreciable extent within the knowledge of the Members of this Institution.

Mr. Josiah Hunt (Member) had much pleasure in seconding the vote of thanks to Mr. Turner for his Paper, which dealt very clearly with the status, rights, and liabilities of Quantity-Surveyors. He was not prepared to accept Mr. Turner's propositions in their entirety, but he did not propose to discuss them now. For the present, he would confine himself very briefly to the general position in which Surveyors were placed and to stating the difficulty which he felt in following Mr. Turner in his argument.

He (Mr. Hunt) held that the Quantity-Surveyor was employed by the building-owner, and that he was liable to the building-owner for the accuracy of his quantities, and he had yet to learn where and how any shift of contract took place as between the parties. There had been no privity of contract, as far as he understood it, between the Quantity-Surveyor and the builder. The Quantity-Surveyor's duty to the building-owner was precise—he had to take out the quantities fairly and accurately—and he (Mr. Hunt) did not see that his liability to the employer (the building-owner) could cease in any way, because he received from the builder, as money had and received, payment for the quantities which he took out for the building-owner. The building-owner employed him and was liable to him for

payment, and he was liable to the building-owner for any inaccuracy in his quantities.

It was quite true that the building-owner would not sue him, if he had made a mistake in his favour; but was the Quantity-Surveyor liable, then, to two parties when he made his contract with one? If it ceased with the one, and began with the other, how was he to know where he stood? When did the builder become liable? Was it at the time the contract was signed? If so, suppose the builder failed next day and did not execute the work! how was the Quantity-Surveyor to be paid—by the builder's bankrupt estate? The whole thing seemed to him to be involved in doubt. The Surveyor had his remedy as against the building-owner. The builder received from the building-owner the money with which he was to pay the Quantity-Surveyor, and in all cases he should hand it over to the Quantity-Surveyor. Wherein was the contract as between the Surveyor and builder, unless the Surveyor accepted it and released the building-owner? Surely, his remedy was against the building-owner. It would require more time to enable him to state clearly what he held to be the position of Surveyors; but he could not agree that they were in a triangular position with sometimes the building-owner and sometimes a bankrupt builder as a client. This was a point of great moment, and one which he would like to argue out on some future occasion.

He would content himself now with referring specially to that most important case as regarded the Surveyor's profession—the case of *Moon* v. *The Guardians of Witney Union*, which it seemed to him had never been fairly settled. It had never, so far as he was aware, been carried to a Court of Error, and rested merely on a decision at Nisi Prius.

Mr. Turner explained that the case was argued in Banco on the finding of the jury.

Mr. Hunt rejoined that this might possibly be so, but it was many years ago, and, at all events, it was never carried to a Court of Error. He was afraid the Surveyor's position in regard to it had never been settled; but, as he said last year, it was his sheet-anchor, and there was no case of the kind of equal importance or anything approaching to it.

The author had said (page 51) that Chief Justice Tindal interpreted "the contract as a conditional one, under which the plaintiff was to be paid by the successful competitor, if there were any." It all turned, it seemed to him, on this—the builder never did pay. The building-owner paid, and the builder received the money from the building-owner, and then paid the Surveyor; otherwise, he never paid him. The builder never paid him out of his own pocket, and the Surveyor had a remedy as against the building-owner. Mr. Turner said that the payment by the builder shifted the liability to the builder, but that, if the builder did not pay, the Surveyor had no remedy against the building-owner. He could not admit the proposition.

The author also stated (page 52) that "very frequently, also, the contract provides that the Quantity-Surveyor shall be paid out of the first sum for which the architect certifies." He (Mr. Hunt) wished this were so. Scarcely a contract contained a clause of the kind. The contract was generally entirely silent upon it. It was simply a memorandum attached to the bills of quantities that the builder shall pay the Surveyor such a sum out of the first instalment he receives. Unless these quantities

were made a portion of the contract, they did not enter into the contract at all. He had known instances, but they were very rare indeed, where reference was made in the contract to the payment of the Quantity-Surveyor.

He would be glad if the author would give some further information about a case mentioned at page 53 of the Paper, where "a builder had contracted upon quantities carefully prepared, and of which the building-owner had the ordinary benefit when making the contract. Payments were made on account; but, as from them the quantities were carefully excluded by the special direction of the building-owner, the Quantity-Surveyor had not the heart to press a man who was hard up to pay the money out of his own pocket. The builder went into liquidation, having received several hundred pounds within the certificate margin, but neither circumstance was deemed sufficient to entitle the Quantity-Surveyor to recover from the building-owner." That might be a very important case as regarded the position of Quantity-Surveyors. If the case were law, it seemed to him to put the Quantity-Surveyor in a very bad position. Further down on the same page, Mr. TURNER said: "And the case is, I should imagine, of sufficiently frequent occurrence to have become the subject of a well-recognized custom to the effect that the shifting of the contract from building-owner to builder is subject to the further condition, that the former remains liable until he pays the latter." Among such a mass of complications, it was difficult to discover where the building-owner's liability ceased, and that of the builder began. According to this contention there ought to be some sufficient notice given by the building-owner (who generally knew little or nothing about the Surveyor) that his liability had ceased, and that the builder's liability had begun.

As Mr. Turner very properly said, on page 55, "the obligations of a Quantity-Surveyor do not arise from duty, for there is no common-law duty binding any man to set himself to the head-aching work in which a Quantity-Surveyor spends his life. They must therefore be founded on contract, and a contract which presupposes reward." Therefore, he thought (and he had a very strong opinion on the subject) that, having a contract with the building-owner, there must be some privity of contract as between the Quantity-Surveyor and the builder, before there was any shifting of the contract as between the parties.

On page 56, Mr. Turner had very lucidly defined the position, in which he thought a Quantity-Surveyor was more likely to be placed than the builder, and in which the Quantity-Surveyor was more likely to go to the wall, he thought, than the builder.

The making the quantities part of the contract was a question of great importance, and one which ought to be very carefully thought out. For his own part, he had always endeavoured to do so; but he had a strong opinion as to the rights of the building-owner, and thought those rights were frequently overlooked. A building-owner wanted to build a house, and to spend, say, £6,000 on it. He was prepared to spend the £6,000, and no more. He proceeded in good faith, and had the drawings and specifications prepared, and the quantities taken out, and sat down in the happy certainty that he had a contract to build a house for £6,000. The drawings and specifications were clear. Now, if the quantities were made a portion of the contract, there was nothing whatever to prevent that unhappy building-owner waking up some fine morning and finding himself saddled with a cost of £10,000, as compared with the £6,000 which he was prepared to

spend. He could not admit that a system could be right which would place a building-owner in such a position without his knowledge.

Mr. Arthur Cates (Member) said that, when this matter was under consideration on a former occasion, he had ventured to submit, for consideration, some propositions which had met with somewhat general acceptance.

He had heard Mr. Turner's Paper with great satisfaction, because he thought, broadly speaking, that his view of the law of the subject justified, to a very great extent, the propositions referred to. He regretted the position taken by Mr. Hunt, because it would almost seem that the complications which he deprecated rather arose from the view which he himself took than from the necessities of the case. Dealing with the subject in the simplest form, it would seem that the Quantity-Surveyor was employed, frequently, without the knowledge of the building-owner at all, by the architect as agent of that owner. Then if a builder accepted the quantities and tendered on those quantities, he became virtually a party to the contract with the Quantity-Surveyor. The acceptance of the quantities, and the making thereon of a tender, which was accepted, appeared to establish a privity between the Quantity-Surveyor and the builder, and the builder would be liable to the Quantity-Surveyor for the amount of his charges in the event of the contract being accepted, being himself entitled to receive them from the building-owner.

The true position of the parties could be best measured by what occurred if the works did not proceed. He would assume that the contract had been accepted and executed, and that the builder had commenced his ordinary preparations. The building-owner changed his mind, or, under

certain circumstances, desired to vacate his contract. Therefore, to relieve himself from responsibility, he asks the builder "To what extent am I indebted to you to release me from this contract?" The builder puts down the Quantity-Surveyor's charges, his own charges, and perhaps something for *solatium* for loss of profit. Having received that amount from the building-owner, he pays the Quantity-Surveyor's and other charges, and the matter is at an end. The propositions which he had ventured to submit were necessarily based upon the very simplest form of transaction—one which was not encumbered by any conditions or by any provision intended to hold the building-owner or guard the builder, but simply this—a Quantity-Surveyor had been employed, who prepared the quantities, the builder had made his tender upon those quantities, the tender had been accepted, and the contract had been signed. If the Quantity-Surveyor had stipulated for payment for the quantities out of the first instalment, that changed the condition of things altogether; but, if there were no first instalment and no payment, where was he to get his money? Mr. Turner had instanced a case where the builder said, "I have had no first instalment and cannot pay you." It seemed a good deal of the difference of opinion had arisen by considering cases which were not simple cases, but complicated ones; to arrive at a simple principle, simple terms, unhampered and untrammelled by any special conditions or circumstances, must be alone dealt with.

Allusion was made by Mr. Hunt to making the quantities part of the contract, and on a former occasion, Mr. Chatfeild Clarke warned Quantity-Surveyors against attempting to make the quantities part of the contract. Mr. Meadows White also very well put the case, that a building-owner would, under such circumstances, be un-

certain as to what his ultimate outlay would be: he might be liable to be called on to pay large sums, through the negligence or default of the Surveyor. He had, however, had occasion elsewhere, as well as in that room, to express very strongly his opinion that there were cases in which it was absolutely essential, for the protection of the builder no less than of the employer, that the quantities should be made part of the contract, and those cases were when the architect himself, or some agent of his, supplied the quantities. It was not necessary for him to enter into detail, for the grounds on which his opinion rested were good and sufficient, as any gentleman of experience would admit. And, except in those cases, it would be fatal to the interests of the profession—it would be, as Mr. HUNT put it, seriously prejudicial to the interests of the building-owner,—and, in every respect undesirable, that the quantities should be made part of the contract. Let the Surveyor accept the responsibility, and, in accepting that responsibility, he would exercise a certain control over the architect. He would take care, being the responsible man, that those defects and ambiguities to which Mr. TURNER had alluded were cleared up, and that his quantities were not issuable until clear and defined drawings and specifications, *or equivalent instructions*, were given to him by the architect. Under these circumstances, the quantities should be accurate, and it would be exceedingly undesirable that they should form part of the contract; but in all instances—and he said it again—in which the architect supplied the quantities himself, or they were supplied by an agent of his, the builder would act wisely if he insisted on their being made part the contract, and he thought that was the only case in which it was necessary or desirable.

Mr. T. M. Rickman (Member) observed that there seemed to be considerable difference of opinion as to the question of liability for the payment of the Quantity-Surveyor. Some thought that the liability rested always with the building-owner; others, that, from the moment a contract was accepted, to the time the money was paid, the liability rested with the builder. It seemed to be inferred that, a professional man having been employed by a building-owner to do certain work, at a particular moment of time the liability got on to some other shoulders, and that, too, when payment could only be by means of the money which the building-owner was himself to find. This to him was incomprehensible, and he preferred to think that the liability on the part of the building-owner remained until the Measuring-Surveyor was paid.

In cases where building contracts fell through, the builder, instead of saying, as Mr. Cates had put it, "I owe the Measuring-Surveyor so much, and I have been involved in certain other expenses," usually said, "You must pay the Measuring-Surveyor. I have certain other claims of my own against you." He had known several instances in which the question had arisen as to the amount the builder was entitled to from the building-owner if the work were not carried out at all; and the position of the Measuring-Surveyor was invariably this—he had to get what he could from the building-owner.

The author had put the case of Smith, Jones, and Robinson, where Jones owed Smith money, and Robinson owed Jones money. Assume that Robinson had given a bill to Jones. Jones handed over that bill to Smith. If Jones did that in the ordinary course of things, Jones was still liable upon that bill, and the liability did not shift unless

he put a special endorsement on the back. But there was no special endorsement in the case of a building-owner and Surveyor, and, in justice, the building-owner was liable to the Measuring-Surveyor until the money was paid.

There was some analogy between the sum payable to the Building-Surveyor and the "provisional sums" in contracts which were now become so common. Under the old system, the finishings of buildings were of a comparatively simple character, and were executed by ordinary artificers, hence, "provisional sums" were not so much needed as now, when interior fittings and decorations were more elaborate and special in each case. Within recent years, provisional amounts had become much more important in specifications, and it was no uncommon thing, for 25 or 30 per cent. of the total amount to be kept, as it were, out of the contract, and treated as a provisional sum. Now, the amount payable to the Measuring-Surveyor was very much in the nature of one of those sums thus inserted in the contract. The object of the insertion of provisional sums was that, for special fixtures or items in the building, the architect should have the opportunity of going to tradesmen of his own selection to obtain articles of special value and excellence. The services of the Measuring-Surveyor would be practically guaranteed by being mentioned as a fixed sum in the specification, and the builder would not have fulfilled the specification until he had paid the Measuring-Surveyor, and this he would do in his capacity of agent to the building-owner.

The recommendations at the end of the Paper were worthy of consideration, and it might be possible for the Council to arrange a Clause for specifications, to place the charges of the Measuring-Surveyor in a more satisfactory position.

Mr. Cates asked whether he was to understand Mr. Rickman to mean that in any specification the charge for the quantities was included as one of the provisional amounts? He had always understood that the charge for quantities did not appear in the specification, but was included in the builder's tender.

Mr. Rickman said he knew of one architect who always insisted, in his specification—he did not say in the quantities—that the Measuring-Surveyor's charges should be paid out of the first instalment.

Mr. Cates rejoined that that made a very essential difference in such special cases.

Mr. Charles J. Shoppee (Member) thought it very important that the contract itself should provide for the payment of the Quantity-Surveyor out of the first instalment, and that the employer should be informed by the architect that it was a payment on his behalf, and must be treated as part of the contract. In this way many misunderstandings would be obviated. He had known cases of great hardship where, owing to the bankruptcy of the builder, the Quantity-Surveyor had great difficulty in getting his money; and, in ascertaining who was liable, the author had laid it down that the liability was shifted as soon as the contract was signed. If this were so, the profession was under a great disadvantage, and he hoped the result of the discussion would be to find some way of remedying so unsatisfactory a condition of things.

Mr. R. C. Driver (Member) asked whether it was quite clear, in most cases, that the building-owner was aware

that he had to pay any one for services rendered but his architect? His own opinion was that a great many building-owners were totally unaware that the Quantity-Surveyor was necessarily imported into the business at all, and that a percentage on the cost on contract price was for the quantities taken out by him independently of the architect's charges. It seemed to him a wrong thing that the building-owner should be left in ignorance of his exact position as regards the Quantity-Surveyor, and that instead of being kept back he ought to be brought forward as a necessary adjunct to the architect. There were several architects present who could say, from their personal experience, whether it was, as a rule, brought to the knowledge of the building-owner that a Quantity-Surveyor was necessary, and had a charge for his services. The stipulation for the payment of the Quantity-Surveyor out of the first instalment to the contractor seemed to him to indicate the contrary.

Mr. G. D. Yeoman (Member) said he had not had much experience in building contracts; but, before a reply was given to the remarks of the last speaker (Mr. Driver), he should like to ask one or two questions which could be answered at the same time as Mr. Driver's. With what object was it that the builder rather than the building-owner paid the Quantity-Surveyor's charges? Everything came out of the building-owner's pocket, either directly or indirectly, and he (the Speaker) failed to see what good could be gained by making the process of paying money more complicated. The only case in which he thought that the builder or would-be builder should pay for quantities was, when buildings were advertised to be contracted for by tender, according to plans and specifications, and then each

builder proposing to send in a tender could have the quantities supplied by paying for them. He made these few remarks for the purpose of deriving information from those gentlemen who, from practical experience, had found in which way the different methods worked best.

Mr. T. Chatfeild Clarke (Member) remarked that the Meeting seemed to be discussing two questions—viz., that of the responsibility of the Quantity-Surveyor on the one hand, and the way in which he was to be paid on the other. They were distinct questions, and it would be well to keep them apart as much as possible.

He had expressed, on a former occasion, his opinion with reference to the Surveyor's responsibility. He thought it advantageous to the welfare of Quantity-Surveyors that they should not allow their responsibility to be in any way interfered with, and that view had been emphatically endorsed by Mr. Cates, under the circumstances stated by him, which met the justice of the case. He (Mr. Clarke) had always arranged to exclude from his contracts any reference whatever to quantities; but the adoption of Mr. Shoppee's view would amount, practically, to the incorporation of the quantities with the contract, which he thought, as many present would agree, would be a course fraught with great danger and uncertainty.

He quite agreed with Mr. Driver that, as a rule, employers knew nothing whatever about the Quantity-Surveyors, though it was desirable to inform them. They left it, as a rule, to their architect to carry the work out, and do whatever might be necessary in the matter. As regarded the question of payment, he had often thought it a very great hardship that Quantity-Surveyors should be thrown on doubtful ground as regards the payment of

their charges (of course, instances of the kind occurred in every man's practice), and he made it a point, when the proper moment arrived, to go to the employer and represent to him that a great hardship would be inflicted if the Surveyor were not remunerated. Of course, in a case of the kind, the responsibility being *nil*, he suggested that the Surveyor should be paid a sum less than the original amount, say, half of that amount. This met the equity of the case, and the Surveyor's claim was not by such a course ignored.

It would be very desirable, he thought, if Mr. Turner, in the course of his reply, could place it beyond doubt that when the contract was taken the responsibility shifted, as he contended it did in his Paper. He was not, himself, aware that the law was so settled.

Mr. E. R. Robson (Member) said that, with regard to the question raised by Mr. Driver, it must be remembered that competition had been growing much keener within the last few years. The building-owner, as a rule, was not now anxious to put his house into a builder's hands at once, but desired competitive tenders, and the architect had to explain that, to get competitive tenders, it was necessary to have the quantities taken out. He did not think he had known a case in which the client was not aware that the quantities were to be taken out and who was going to take them out.

In his opinion, the law relating to the subject was very far from being settled, and it seemed to him that advantage would result from the appointment of a small Committee to consider the subject. A case illustrating the position of the Surveyor had happened, in his own experience, within the last few weeks. A builder signed a contract, went on with his work to a certain extent, got his first certificate, and

then became bankrupt. On examination, he found that the builder had paid the Surveyor in two cheques—one dated a month later than the other. The first was dishonoured, and the second never presented. Who was liable to the Surveyor? He confessed he did not know.

Mr. Turner, after acknowledging the vote of thanks, said, in reply, that he might again refer to the noteworthy Fitzherbarde, because the discussion has illustrated his statement that every Surveyor knew something of the law. That being so, he did not propose to tax the patience of the Meeting at any length with his observations. To answer the last question first, he imagined, in the case put by Mr. Robson, that, legally speaking, the Quantity-Surveyor who had elected to take the cheque, being a negociable instrument given by a particular person, was entitled to look to that person as his debtor, and not to any one else. In such a case there was a complete shift of the contract; and if it unfortunately happened that the Quantity-Surveyor was not paid, he did not think it was a case of very great hardship—no greater, at any rate, than the many others in which money was lost through a bad debtor.

But, having been struck, in the course of his experience, with the hardship of cases such as that to which he had referred, he had been surprised to find that there existed such little evidence of custom in support of what, he ventured to think, was a just and equitable qualification of the shifting of the contract. That it did so shift was, he thought, well settled by the cases of *Moon* v. *The Witney Union*, followed by *Taylor* v. *Hall*, and confirmed, to some extent, by the case of *McConnell* v. *Kilgallen*. He had personally known many cases within the last few years, in which,

when the contract had been entered into, and the builder had failed to pay, the Quantity-Surveyor successfully maintained an action against him and recovered his money. That being so, the building-owner had once paid the builder, then he (Mr. Turner) saw no hardship on the Quantity-Surveyor, because he could maintain his action against the builder, legally, as soon as the contract was signed—equitably, certainly, as soon as the building-owner had paid.

He ventured to suggest that a remedy should be provided by framing some rules which could have the effect—by custom or by reference to them in the contract—of meeting the particular transaction. Granted that the contract shifted, it shifted only by force of custom. Custom, in that respect, as in all others, must have grown up gradually without any definite intention, but simply because it became recognized, on the part of those who had to deal with the matter, whether as building-owner or Surveyor, that such a mode of dealing was reasonable and convenient. Was it, then, very unreasonable to suppose that, in the course of time, there may have been enough instances in which a builder had failed before paying the Quantity-Surveyor, and on which something like a rule (or, better than a rule, a custom, which was only the uniformly recognized and best rule) had been established between and by desire of the parties. It was rather for Quantity-Surveyors themselves than for lawyers to ascertain whether such a custom had grown up, and such a custom, like every other, must be proved by evidence, as any other fact must be.

He agreed with Mr. Hunt, and with one or two other gentlemen who had spoken, as to the responsibility of the building-owner. No doubt, he was the man who really paid

the builder and the Quantity-Surveyor to do the work; but he thought the position must be dealt with practically; and that position was perfectly clear from the case to which he had alluded, and in which the Court of Appeal, by an unreported decision, had held that the responsibility of the building-owner ceased when the contract was signed, in the absence of evidence of contract or custom to the contrary.

The President said that the report of the evening's proceedings would form an additional feature of undoubted interest in the "Transactions" of the Institution. The questions at issue had been very ably discussed, and from somewhat different points of view, though he could not quite agree with Mr. Clarke that what were really separate questions had been under discussion together. The liability of the Quantity-Surveyor to his employer, for the accuracy of his work, and his employer's liability to him for payment for that work, were hardly two separate questions, so much as two phases of one—the law as affecting Quantity-Surveyors.

As regarded the Surveyor's liabilities, it must be remembered that, in all professions, gross negligence must carry its consequences with it; therefore, such rules as had been suggested would not get rid of those consequences. As regarded the remarks of Mr. Driver, he could hardly believe that there was any large number of people who were ignorant of the interposition of the Quantity-Surveyor, and who paid away money without knowing what they were paying for. For his own part, he never could see why the builder should pay the Quantity-Surveyor, and why the building-owner, who paid the architect, should not also pay the Quantity-Surveyor. In his own small transactions of the kind, he had always paid the Quantity-Surveyor as

well as the architect, and had never any doubt as to whom he was paying or what he was paying for.

He felt that the Institution was very much indebted to Mr. Turner for making so very interesting an addition to the "Transactions."

The vote of thanks having been put and carried unanimously, the Meeting then adjourned.

No. 92.]

THE LAND QUESTION IN 1880.

By DANIEL WATNEY (Member).

Read at the Ordinary General Meeting of the Institution of Surveyors, *December 13th*, 1880.

THE PRESIDENT IN THE CHAIR.

Some weeks since I pledged myself to introduce a discussion at this Institution upon "The Land Question in 1880"; but had I known the difficulties of my task, which have since developed themselves, I should have left it to a more able and experienced man than myself, knowing well that it is so much easier to criticise the expressed views of others than to define a mode of procedure in such a vexed question as we have now before us.

I propose to divide my subject into two parts—the Land Question in Ireland and the Land Question in England; for, although to some extent the same general principles may apply in both cases, yet in detail they widely differ.

As we are all aware, there is at the present moment, in Ireland, an alarming agitation against the ownership of property, and, in a modified degree, there is also an agitation this side of the water; but, while in the sister island it is carried on by unscrupulous men, in England it is the outcome of the deeply-seated convictions of some of our eminent political economists.

I will not now dwell on Mr. Caird's crusade against the "limited owner," who is charged with hindering our freedom of action (so dear to all Englishmen) in maintaining our national position, but I would ask how can even an absolute or unencumbered owner at the present time be compelled to

utilize his land to the best advantage for the community at large? He can surely maintain his freedom of action unless, with the abolition of the "limited owner," the State interferes with the hitherto-acknowledged sacred character of individual property, and I fail to see the logical result of Mr. Caird's criticism, unless it be at the same time conceded that all individual property of every kind is to be held in trust for the national benefit.

Froude says, "Land, properly speaking, cannot be owned by any man; it belongs to all the human race. Laws have to be made to secure the profits of their industry to those who cultivate it; but the private property of this or that person, which he is entitled to deal with as he pleases, land never ought to be, and never strictly is"; and, according to Bentham, "all improvement in the value of land" (or as Mr. Mill put it, "the unearned increment in land"), "should be confiscated to the State." But why should this doctrine apply to agricultural land only? Surely, if the principle be correct, it should apply also to land used for commercial and residential purposes, and would, in that case, press far more severely on the latter than on the former.

The Land Question in Ireland.

I take it for granted that the almost general feeling which prevails, not only in Ireland but throughout the United Kingdom, is that some improvement is necessary in the relations between landlords and tenants in Ireland.

Both classes are now seeking for protection; and it is much to be deplored that the issue has been raised in the southern and western provinces of Connaught and Munster, by force and intimidation, and is now creeping up slowly, but I fear too surely, into Leinster, and even into the loyal province of Ulster.

The Irish Land Act of 1870 was passed in the hope that it would prove the basis of a settlement of the Land Question in that country, and secure to the tenant all that he was reasonably entitled to; but it has neither realized the expectations of its supporters nor satisfied the tenant-farmers.

I give my views upon this branch of my subject with great diffidence, because, although I have had very considerable experience in all parts of Ireland, but more particularly in the province of Ulster, yet the questions raised are so vast, and the relations between landlord and tenant so entirely different from those we are accustomed to in England, that I fear I can but imperfectly explain the present position of affairs, and I feel assured that any solution of the difficulty which will satisfy all parties is simply unattainable.

On one point, however, all those who know Ireland and the sanguine and excitable temperament of its people, will agree with me when I say, that no radical or violent change in the land tenure of Ireland, can, with any safety, be attempted, but that the amelioration of the agricultural population must be gradual, and that they must be taught to depend more upon their own thrift and industry than on the rifle and the revolver.

The chief point, however, at issue, appears to me to be the question of rent, and this, in Ireland, as in all other countries, is regulated by the demand. Those who are unacquainted with Ireland cannot comprehend the "earth hunger" which consumes the Irish tenant, and the wonderful progress made in Ireland during the past quarter of a century —as regards the improved cultivation of the soil, the character of the stock, the increased prices of all produce, the extended and constantly extending facilities for transit of both produce and stock, by new railways and new lines of steamers to England and Scotland,—and which has induced tenants to

compete for land, and so to raise the rent upon themselves; and taking into consideration the increased productiveness of the soil, and the enhanced prices, the annual value of fair agricultural land in Ireland has nearly doubled in the past thirty years. The tenants insist that this increment in value is due altogether to their exertions, and that they, and they only, should reap the benefit. But what is the actual state of the case?

By turning to the Annual Report of the Public Works Loan Board (England) for 1879-80, it appears that the Commissioners have advanced for railways in Ireland £2,686,550, and for harbours £284,279, while the Commissioners for Public Works in Ireland have, up to the same period, advanced nearly £30,000,000, of which over £3,000,000 were advanced for the improvement of land, £147,000 having been advanced last year for that purpose, and over £167,000 was also advanced last year for the construction of railways. Of the amounts thus advanced, nearly £8,000,000 have been remitted. It can hardly be contended that the results attained by the expenditure of these £30,000,000, and by the vast sums of money expended by corporate bodies and by the landlords throughout Ireland, out of their incomes and solely for the benefit of their estates, are due in any way to the exertions of the tenants, and that the increased annual or rental value of their holdings thereby created can be fairly or honestly claimed by them as tenants' improvements.

On one estate I am well acquainted with, in the north of Ireland, the area of which is about 16,000 acres, in the hands of about 1,100 tenants, the rental in 1832 was £8,500; from that time to the year 1873 the expenditure for the benefit of the estate and for management was over £200,000, and the gross rental now stands at under £12,000, with the Government Valuation at £11,500,

although there is a railway through the heart of the estate towards the maintenance of which the landlord contributes £500 per annum entirely for the benefit of his tenants, as he is non-resident. In this case the present rental is only 4 per cent. above the Government Valuation, and it is only one of many examples which might be cited.

There is no doubt that, prior to 1870, the landlords of small estates (and there were 47,000 owners whose estates did not exceed 100 acres) did, in many instances oppress their tenants by raising their rents according to their own necessities, and the tenants had then no alternative but to pay or go; but on the larger estates this system was not, with very few exceptions, adopted. I know two small estates which were purchased prior to 1870, and the rents at once nearly doubled, after which the estates were mortgaged for more than their cost price.

I believe that the celebrated "Griffith's Valuation" is answerable for a large portion of the prevailing discontent, for, while in England the rateable value of property is altered from time to time as occasion arises, in Ireland it has remained the same since that valuation was made.

It is true that it has, during that period, been considered both by landlords and tenants as a guide to annual or rental value, and has been held by all the Courts in Ireland as an important element in ascertaining the fair rent of any holding; but, so far as I know and am able to ascertain, it was, at the time it was promulgated, universally considered to be 25 per cent. below the then fair annual "live and let live" value of the land, and at the present time there should not, among people endowed with ordinary common sense (and allowed to exercise it), be any doubt upon the point.

In all sales of real property, both under the Encumbered Estates Court (now the Landed Estates Court) and otherwise, and in all sales of the tenant-right in any farm, the

Government Valuation is always put in print, side by side with the rent, so as to afford intending purchasers an opportunity of comparing the one with the other; and it may be noticed that in a sale only last month, under the Landed Estates Court, a farm realized 40 years' purchase on the existing rent, which was considerably lower than the Government Valuation.

An Act of Parliament was passed in the year 1846, and another in 1852, each intituled "An Act to Amend the Laws Relating to the Valuation of Rateable Property in Ireland," and a Bill was laid before Parliament for the same purpose in 1877, prepared and brought in by the Hon. W. H. Smith, Sir Michael Hicks Beach, and the then Attorney-General for Ireland.

The average prices of agricultural produce in Ireland, as taken from the Government Returns, are given in the two Acts of 1846 and 1852, and in the Bill of 1877, and are as follows:—

Produce.	1846.			1852.			1877.		
Per Cwt. of 112 lbs.	£	*s.*	*d.*	£	*s.*	*d.*	£	*s.*	*d.*
Wheat . . .	0	10	0	0	7	6	0	10	0
Oats	0	6	0	0	4	10	0	7	8
Barley . . .	0	7	0	0	5	6	0	8	4
Potatoes . . .	0	1	7		—*			—*	
Butter . . .	3	9	0	3	5	4	6	1	4
Beef	1	13	0	1	15	6	3	10	0
Mutton . . .	1	14	6	2	1	0	3	14	8
Pork	1	5	6	1	12	0	2	11	4
Flax		—		2	9	0	3	0	0

* The price of potatoes is not given either in the Act of 1852 or the Bill of 1877, but it is now 3*s.* per cwt.

From these Tables it will be seen that, whereas the price of wheat was stationary, the prices of the principal products of Ireland increased between 1852 and 1877 as follows :—

	Increase per cent.
Oats - - - - - -	58
Potatoes - - - - -	94
Butter - - - - -	85
Beef - - - - - -	97
Mutton - - - - -	82
Pork - - - - - -	60
Flax - - - - - -	22

Sir Richard Griffiths, in giving evidence before the Committee of 1844, stated that one-third added to the Government Valuation would give very nearly the full rent of the land; and as a matter of fact, at the present time, for the purposes of succession duty on property in Ireland, one-third is added to the Government Valuation.

There should, however, be set off against the increased value of all agricultural produce the increased price of labour; but the balance will be found to be very greatly in favour of the tenant.

From the Agricultural Statistics of Ireland for the year 1879, I find that the total acreage of Ireland is 20,327,196 acres, of which about 15½ million of acres are occupied by tenants—and the remainder is given as *Waste Land.* Of the 15½ million of acres, about two-thirds is in grass or pasture, and one-third or 5,200,000 acres under crops, including meadow and clover.

Of the 5,200,000 acres under tillage, 34½ acres in every 100 were under cereals, 25 under green crops, 2½ under flax, and 38 under meadow and clover.

The number of holdings in Ireland in 1879 was 576,040, classified as follows :—

Holdings not exceeding			1	acre	50,140
„	above 1 not exceeding		5	„	65,269
„	5	„	15	„	162,233
„	15	„	30	„	136,649
„	30	„	50	„	73,171
„	50	„	100	„	56,513
„	100	„	200	„	22,223
„	200	„	500	„	8,296
„	500				1,546

The tenants holding land not exceeding 1 acre are to a great extent occupiers of small gardens, and therefore can hardly come under the denomination of tenant farmers. The holdings above 1 and not exceeding 5 acres have decreased 79 per cent. in Ireland between the years 1841 and 1879, to the great benefit of the country, but from the foregoing Tables it will be seen that at the present time they represent nearly 12 per cent. of the total number.

The holdings between 5 and 15 acres amount to 28 per cent. of the total number, although the decrease between 1841 and 1879 has been 35 per cent.

The holdings between 15 and 30 acres amount to 24 per cent. of the total, and have increased 72 per cent. in the like period; and holdings above 30 acres have increased 232 per cent.

It is a matter of serious consideration whether the popular cry of the Three F's—viz., Fixity of Tenure, Fair Rents, and Free Sale—has not in it the elements of a settlement of the question, if only those elements could be evenly and fairly adjusted.

1st.—Fixity of Tenure,

In the Irish dictionary, is held to mean that the tenant shall not be disturbed in his holding by any act but his

own; or, in other words, perpetual and undisturbed possession of the soil so long as he pays a fair rent; but I should define Fixity of Tenure as a claim by the occupier to be the absolute owner of the soil, subject to his paying a fixed rent-charge to the landowner.

The true point however at issue is, whether improvements made by a tenant become exhausted in process of time, and enure to the landlord, or whether they are to remain unexhausted and the property of the tenant to all time, and become his tenant-right, to be bequeathed or dealt with by him as his absolute and *bonâ fide* property.

Improvements made by a tenant are defined by Section 70 of the Land Act of 1870, and the tenant is not entitled, on quitting his holding, to compensation for any improvements made 20 years before the claim, except for permanent buildings and reclamation of waste land. The Land Act of 1870 therefore recognizes, in its fullest extent, the property of the landlords in the soil, and expressly lays down the principle that all improvements made by a tenant become exhausted in course of time, and, assuming an improvement made by a tenant other than a permanent building or a reclamation of waste land, his interest would cease in that improvement after 20 years had elapsed; and, with regard to permanent buildings and reclamation of waste land, I think we are bound to assume that it was intended the tenant's interest in them would be limited and would also expire and become exhausted in process of time. I think by the Act the tenant has ample security for payment by his landlord or assignee for any improvements made by him, and, to a certain extent, this security does practically afford him Fixity of Tenure, provided he can pay his rent, and does not sub-divide his holding.

Taking fixity of tenure, however, in its widest sense, it must be limited in its application, for the reason that

the rights of property, both in the landlords and tenants, must be maintained (although they may be improved), unless the wild visions of some of the agitators in Ireland are realized by the State buying up in a compulsory manner the rights of the landlords. I fail, however, to see how the position would be improved if this were done, because the interest on the price which the State would have to give would still remain a rent upon the tenants, and, if redeemable at the end of a certain number of years, would certainly not be less than the fair annual rent for the next thirty-five years. I think, however, that, assuming the tenants are willing to pay fair rents on the principle which I will presently give under that head, they might, without unduly trenching upon the rights of the landlords, have, in a certain degree, fixity of tenure in their holdings (if they are willing to accept it) for terms of years varying according to the value of their holdings, at a percentage on a new Government Valuation, such percentage varying with the annual value of the holding. The higher the value, the longer the term should be, so as to promote the consolidation of the smaller holdings; but in any case, on the leases being granted, all arrears of rent should be then and there paid up.

Absolute fixity of tenure must, however, in any event, have its limits, unless the State compensates the landlords not only for facilities for improvement, but for prospective value, with an addition for compulsory sale. For example, assume that a railway has, during a lease to a tenant, been constructed through his holding, and that the value of such holding has been increased from an agricultural value of, say, 20*s.* per acre, to a building or accommodation value of from £5 to £10 per acre. In that case is the landlord entitled to reap the benefits which have accrued to him, or is the tenant, on

the expiration of his lease, still to remain in that holding at an agricultural rent?

2nd.—Fair Rents.

To put the rental value of the agricultural holdings in Ireland on a basis unimpeachable alike both by landlords and tenants, appears to me the first and most imperative duty of the Executive; and this can be done by an immediate re-valuation of all the holdings, taking as a basis the productive qualities of the land and the present prices of agricultural produce. It has been recently stated, by one of our most eminent men, that the rent of agricultural land in England varies from half the value of the produce in certain cases of grass land, to one-ninth of the value of the produce of arable lands; but in Ireland, I am induced to believe, after much consideration of the climatic and other incidents of the agricultural condition of that country, that one-fifth of the value of the marketable produce which the land is capable of producing should be the annual rent of the holdings, subject to a deduction for tenant's improvements as defined and limited by Sections 4 and 70 of the Land Act of 1870, and subject also to the tenant-right interest of the tenant as it now exists.

The assertion is freely made that the landlords are now exacting exorbitant rents; and, as this statement is liable to be misunderstood, I will endeavour to show how, by the Land Act of 1870, landlords are precluded from unduly raising their rents, unless they are prepared to reimburse their tenants for disturbing them in their holdings as well as for their improvements. Let us suppose that a tenant is paying £12 per annum rent, the Government Valuation being £10. The landlord gives notice that, on and after the 1st November following, the rent will be raised to £15 per annum. This the tenant states that he cannot

or will not pay, and the landlord thereupon serves a notice to quit, and brings an action of ejectment. The tenant then lodges a claim for compensation for being disturbed in his holding by the act of his landlord, and his claim is as follows :—

If in a district where the Ulster Tenant-Right Custom exists, then by virtue of that custom, or with the consent of the Court, under Section 3 of the Act ; and in districts where that custom does not exist, then, under Section 3, he claims on the value of his holding under the Government Valuation—

If the Government Valuation be £10 or under, a sum which shall in no case exceed	7 years' rent.
Above £10, and under £30 . .	5 do.
„ £30, „ £40 . .	4 do.
„ £40, „ £50 . .	3 do.
„ £50, „ £100 . .	2 do.
„ £100, „ . . .	1 do.

And in addition to the above, he claims for improvements made by him in his holding.

The case coming on for hearing, the landlord would plead that he served the notice to quit simply because the tenant refused to pay an increased rent, but still only a fair rent, and that he had no wish to disturb his tenant for any other reason. If the Court held that the rent was a fair one, the landlord would be held not to have disturbed the tenant, and the latter would have either to pay the increased rent or go ; but, if the Court decided that the rent was exorbitant, the landlord would be mulcted in all the expenses, as well as for compensation both for improvements and for disturbance attendant upon capricious eviction.

By Clause 9, it is enacted that ejectments for non-

payment of rent, or for breach of any condition against assignment, sub-letting, bankruptcy, or insolvency, shall not be deemed disturbance of the tenant by the act of the landlord, and, if a tenant be ejected on any of these grounds, he shall stand in the same position as if he were quitting voluntarily, in which latter case he is not entitled to any compensation; but although he cannot, in either of these cases, force his landlord to pay him the value of his improvements, yet he can insist, in the event of his landlord declining to do so, or in the event of his landlord not finding an incoming tenant who will do so, that the landlord shall accept any respectable and solvent tenant he (the outgoer) can produce, who is willing to pay him for his improvements.

As there is, at the present time, an unlimited demand for farms in Ireland, it will, I think, be acknowledged that a tenant, even if evicted for non-payment of rent, can secure to himself the value of his improvements.

As a matter of fact, both landlords and tenants frequently resort to the Court for a settlement of this vexed question of rent; the former having no desire to get rid of his tenant, who, on his part, has no intention of quitting his holding; the landlord hoping, by taking the proceedings for ejecting his tenant, to have judgment in his favour on the ground that the rent he demands is fair and reasonable, and the tenant that the judge will denounce the rent demanded as exorbitant, and the terms offered by the landlord as neither fair nor reasonable.

3rd.—Free Sale.

On this point the question naturally arises—what has the tenant to sell? And the answer follows—the interest in his holding. Now, if the tenant has bought or acquired by inheritance an interest in his holding, it is only just that

he should be at liberty to sell it; but why should he be allowed to sell that which by law and custom belongs to his landlord, and thereby diminish the number of years purchase which the freehold interest has heretofore been worth? In the Landed Estates Court, at the present time, the judges refuse, under the powers given to them by the Land Act of 1870, to sell property at the prices bid, or to allow sales to proceed; and the reason of the depression in the value of land is not because the country is in a state of poverty or because the tenants generally are unable either to pay their rents or to purchase the freehold by paying down one-third of the price and paying off the other two-thirds by instalments; for, as a matter of fact, the country, taken altogether, is in a prosperous financial condition, and the harvest of 1880 is acknowledged to have been the best for the past 25 years.

I do not see how the limits for free sale can be enlarged unless by the Government offering greatly-increased facilities for emigration to those who desire to part with their *bonâ-fide* interest in their holdings, and thereby, at the expense of the State, increasing indirectly the value of their interest without diminishing in any way the interest of the landlords.

Peasant Proprietorship.

Just a few words upon this subject, the development of which was one of the principal objects of the Land Act of 1870, and was dealt with under what are generally known as the Bright Clauses of that Act. These Clauses were introduced to facilitate the acquisition, by purchase, of the ownership of farms, by agreement between the owners and the occupying tenants, at a price to be judicially determined by the Court—two-thirds of the purchase-money being obtainable from the Board of Public Works at 5 per cent. interest, repayable in 35 years by half-yearly instalments. As a matter of fact, the advances made to

tenants by the Board only amount to £474,378 to the 31st March last, and therefore the actual value of the lands so dealt with may be taken as under £630,000.

The fee-simple value of the agricultural holdings in Ireland has been recently estimated at rather over £300,000,000; and, assuming this to be correct, one-sixth of the entire value of Ireland, or, in other words, lands to the value of £52,000,000 have passed into the hands of purchasers through the Landed Estates Court.

The object of the Bright Clauses was to secure increased prosperity to the tenants, not at the expense of the landlords, but by better cultivation and by steadier care and industry on their part; and these results were sought to be obtained without occasioning any shock or violent changes in any single arrangement between landlord and tenant.

But these Clauses have not conferred the benefits which their author anticipated:—

1st.—Because the tenants have been crippled by the payment of one-third of the purchase-money.

2nd.—The period for repayment is too short, and the interest consequently so high, that it almost invariably far exceeds the old rent.

3rd.—The Board of Works will not make advances except on Landed Estates Court titles; and any landowner who has passed his estate through that Court knows only too well that it is a tedious and expensive business.

The Irish Church Commissioners were bound by the Irish Church Act of 1869 to offer to the tenants the farms held by them at prices to be fixed by the Commissioners,—the tenants to pay in cash one-fourth of the purchase-money, and to pay the remaining three-fourths by half-yearly instalments, which instalments, in almost every case, exceeded the old rents.

It certainly appears to me that any general system

of compulsory sale to the tenants, or any confiscation of the landlord's interest, would inevitably result in the withdrawal of English capital and resident landowners from Ireland, and would, in the course of a few years, leave that country in a far more depressed condition than at present; for how could the poorer class of peasants in the west of Ireland support themselves and their families any better if they were placed in possession of the fee-simple of their holdings, which are now utterly inadequate to support them, and when the capital which now helps to enrich the country were withdrawn? Passionately attached as they are to the soil, it is neither for their benefit nor for that of the country at large that they should be encouraged to think that such a life, under such conditions, is one that meets with the approval of their fellow-men.

It is obvious that, although by Act of Parliament greater facilities than at present exist could be given for creating peasant proprietors in Ireland, yet the result wished for could only be attained by slow degrees; and I feel convinced that the wholesale creation of peasant proprietors by compulsory powers would soon sink that country still lower than it is in poverty, ignorance, and helplessness.

Mr. Gladstone, in one of his recent Midlothian speeches, said: "I cannot believe that the large properties of this country, generally or universally, can or will be broken up into small ones. I do not believe that the land of this country will be owned, as a general rule, by those who cultivate it";—and Judge Longfield (than whom no man in Ireland is more conversant with the subject) says: "I shall not enter into much discussion respecting the utility of peasant proprietors, because I feel it would be very difficult to create them and impossible to keep them in such a country as Ireland." He adds that

he regards them not only as inconsistent with the mental activity of Irishmen, but as inconsistent with the circumstances of the country.

Reclamation of Waste Lands.

Under Section 4 of the Land Act, 1870, the tenant is not entitled to compensation in respect of any improvements made 20 years before the claim, except for permanent buildings and reclamation of waste land; so that, while other improvements must have been made *within* 20 years before the making of the claim, the tenant may claim in respect of permanent buildings and reclamation of waste land executed by him anterior to 20 years before the claim is made.

There are in Ireland at the present time, according to Agricultural Statistics for the year 1879, between 4,000,000 and 5,000,000 acres of waste land, of which—

1,741,347	acres	are scheduled as	Bog and Marsh.
2,054,208	„	„	Barren Mountain.
848,431	„	„	Water, Roads, Fences, &c.

and it is obvious that more than one-half of the above area is practically irreclaimable. Of the remaining 1¾ millions of acres, some portion might be reclaimed, although it is questionable whether, from a financial point of view, it would be a success, unless the employment of labour may be taken as compensating in some degree for the loss of interest on the outlay. Much reclamation, however, is done, year by year, by means of money borrowed from the Board of Public Works for the Improvement of Landed Property in Ireland by resident and non-resident landlords for the improvement of their estates, as is evidenced by the returns which I have already given in this Paper; and I may mention that Sir Richard Griffiths reported in 1844 that 1,425,000 acres were improveable for

cultivation, and 2,330,000 were improveable for pasture, making a total of 3,755,000 acres improveable out of a *then* total of over 6,000,000; and Dr. Hancock in his report states that to 1862 more than one-half of this acreage of 3,755,000 had been improved, and less than half—and that, of course, the most unprofitable half—then remained available for improvement.

In connection with this subject, it must not be forgotten that many hundreds, nay thousands, of tenants in Ireland are at the present time making a bare subsistence on land said to have been reclaimed by them, but which in bad seasons such as 1879 cannot possibly produce sufficient to keep the tenants and their families from starvation, and which from every point of view would have been far better left in its original unreclaimed condition.

To sum up the question in all its bearings, I firmly believe that the miserable condition of the people in the south and west of Ireland, is occasioned by over-population and by the smallness of the farms, to which the peasants cling, and from which they vainly endeavour to obtain sufficient for the support of their families. To remedy this, increased facilities should be given by the State in aid of the emigration of whole families, and not, as heretofore, of the able-bodied only, and the consolidation of farms should also be promoted by the Government advancing money for the purchase by tenants of the tenant-right in farms adjoining their own holdings.

What is also much needed by the smaller tenants is protection from the exactions of the smaller proprietors and the usurious shop-keepers.

If (after the majesty of the law is vindicated and order restored) fair rents throughout Ireland were at once settled on the basis of a Government Valuation, and leases given to solvent tenants for their lives, or for fixed periods varying

with the value of their holdings, I firmly believe that country would emerge from her present difficulties, and prosper far more in the next quarter of a century than she has done in the last.

The Land Question in England.

As I have before stated, it is not my intention to dwell upon the legal aspect of this question, but simply to open a discussion on the condition, at the present time, of agricultural land in this country, and the means to be adopted by landowners and their tenants to maintain their relative positions, and adapt their interests to the altered conditions of agriculture consequent on the competition by America and our Colonies in providing us with supplies of food at reduced prices. There is no doubt, as Mr. Caird stated, a week or two ago, in his inaugural address to the Statistical Society, that a great change is being effected in the agricultural condition of this country and its agricultural population, and that our system of farming is already beginning to accommodate itself to the changes which American competition has rendered necessary. As evidence of this, the Agricultural Returns show that, in the past fourteen years, our acreage in wheat has decreased 20 per cent., and in oats 10 per cent., while green crops and grass have increased in nearly like proportions.

But it must not be assumed for a moment that to foreign competition alone is to be attributed the present agricultural depression in the corn-growing districts of England, as by far the greater part of it has been caused by five consecutive bad seasons, and the consequent diminution, year by year, of the tenants' capital.

We have every reason, however, to be thankful that we are not now as a nation dependent for our supply of food upon

our home production, and that, during the severe depression of the past 5 years, both bread and meat have been unusually cheap; for it is obvious that, but for imports from America and other countries, we should have had food at famine prices, and the distress and depression would have been much intensified.

There are, at the present time, very many farms in the hands of their owners which have been thrown up by the tenants in consequence of their insolvency, and the majority (as I fear every land-agent in this room can testify) have been so thrown up in such bad condition that they can only be relet at a nominal rent for two or three years, or, if kept in hand, must necessarily entail a heavy outlay and loss on the part of the landlords.

By reference to the Agricultural Returns for Great Britain for 1879, it will be found that the grazing, or western, division of England comprises 21 counties, with an area equal to 53 per cent. of the whole; and the corn-growing, or eastern, division also includes 21 counties, having an area equal to 47 per cent. of the whole. The cattle in the grazing counties represent 65 per cent. as against 35 per cent. in the corn-growing counties, and sheep 53 per cent. in the former as against 47 per cent. in the latter.

I may remark in passing that, in my opinion, the Ground Game Act of 1880 has conferred a boon not only upon tenants, but also upon landlords; and I am confident that any land-agent must welcome the change which secures him from the many well-founded complaints which have hitherto been made to him of damages done by rabbits, and which in most cases he has been unable either to prevent or to remedy.

What, then, are the changes which can be effected in the relations between landlords and tenants, and how can that mutual good feeling and confidence which has hitherto

subsisted between owner and occupier be still further cemented?

First, in my opinion, by the removal of restrictions as to the cultivation of land and as to the sale of produce, such as hay, straw, and roots. It was very proper, no doubt, fifty years ago to insist on the four-course system being followed, and also to insist on all the hay and straw being consumed on the farm, because, at that time, artificial manures (except lime) were hardly known; but now I believe that the only restrictions necessary are to insist that in each year a certain proportion of the arable land shall be properly fallowed and dunged, and that another proportion shall be sown with clover or grass seeds; while, as to the sale of hay, straw, and roots, I may remark that without high cultivation English farming cannot be profitable, and one of the first axioms of high cultivation is that the land must be liberally dressed with bought manures in addition to the dung made on the farm, and that feeding stuffs and cake must be used in large quantities.

In olden times, when the restrictions against selling anything off the farms, except corn and stock, were imposed, there were no facilities for obtaining manures of any kind, and the dung which was made in the yards was all that the farmer had to depend upon. These restrictions should now, in my opinion, be removed, except during the last year of the tenancy, or after notice to quit given by either landlord or tenant.

Secondly, I consider that security should be given to the tenant, by legislation, for permanent improvements made by him during his tenancy. How this is to be effected may be a matter of opinion; but I have no doubt that, if the Agricultural Holdings Act (England), 1875, were amended and made compulsory, and not permissive, it would confer a benefit on both landlords and tenants, although I would

suggest that, in the new Act, a landlord, in any event, should be able to claim damages for deterioration of the holding and not, as in the present Act, only by way of counterclaim.

To encourage tenant farmers to farm highly, and to use feeding stuffs and cake in any quantity towards the end of their leases, I would suggest that the Lincolnshire custom should be, as far as possible, extended, and that the tenant should be repaid on quitting for a proportion (from one-half to one-third) of the price of certain feeding stuffs and cake fed on the farm during the past year.

Thirdly, all wet lands should be drained, and the arterial drainage of the farms and estates properly attended to; and the poor clay lands should be laid down in permanent grass; sheds should be erected for the increased number of cattle thereby maintained, and good cottages provided for the agricultural labourers. Money for these works can be obtained from several public companies, repayable by instalments, and charged upon the estates. Again more land should be turned into orchard and fruit plantation, and a larger area devoted to green crops.

One of the chief difficulties of the tenant farmer during the past 10 years has been the question of labour, the worst features of which are that the labourer himself has deteriorated, and that his work has also deteriorated, both as to quality and quantity, so that it may be accepted as a fact that labourers' wages have increased 25 per cent., and that the value of his labour has decreased in almost the same proportion. This, however, is, to some extent, remedied by the labour-saving machines which are now so extensively used throughout the country.

There can be but little doubt that America can and will produce wheat and beef, and probably cheese and bacon, and deliver them here at cheaper rates than we can produce them; but at the present time we can hold our

own as regards barley, mutton, wool, and dairy produce. Barley should be grown in preference to wheat on suitable soils, and heavy land that will not grow barley should be, to a large extent, laid down in permanent pasture. By laying down I do not mean just sowing the grass seeds at a cost of from 25*s.* to 35*s.* per acre and then letting the land take its chance—for, if the newly laid-down lands are not carefully treated and manured during the next five or six years at a cost of from £2 to £5 per acre, they will almost inevitably require breaking up, and will, in the meantime, have been, except perhaps in the first year, a loss to the occupier. Dairy farms and the rearing and feeding of cattle are also profitable, and should be everywhere encouraged, and a larger area of land should be devoted to the growth of green crops.

One of the chief problems, however, of the present day is the system of local taxation, so ably treated by our PRESIDENT in his Opening Address, at pages 24 to 26 of the current volume of our "Transactions." It certainly does appear that local taxation is, at the present time, very unequally distributed, and that some portion of it should be transferred from real to personal property, taking Schedule A of the Income-tax as the basis upon which the Poor and other Local Rates should be levied.

In conclusion, I would urge most strongly upon all landowners and land-agents the absolute necessity, at the present time, of giving every assistance in their power to all good tenants to enable them to tide over their existing difficulties; and I am convinced that the agriculture of this country, although it has received a violent shock, will emerge successfully from the terrible ordeal it has undergone, and that the British farmers will be able in the future, as in the past, to hold their own against the cultivators of the soil in any country in the world.

Mr. C. G. Grey (Member) moved a cordial vote of thanks to Mr. Watney for the very able Paper he had read. The Irish Land Question had been treated at considerable length by the author, and there were many points in which he was in agreement with him, but there were others from which he dissented. For the moment, however, he would prefer not to enter upon the discussion of the Paper, and would postpone any remarks he might have to make until a future occasion.

The President observed that the discussion was certain to extend over another if not two more evenings, when Mr. Grey and others who preferred to reserve their remarks for the present would have another opportunity of addressing the Meeting.

Mr. E. P. Squarey (Vice-President) begged to second the vote of thanks. He thought that Mr. Watney had discharged a difficult task with great ability. Looking at the dimensions of the subject, he felt, like Mr. Grey, that it would be better to wait until another occasion before expressing his views respecting it, and when the proper moment arrived would, with the permission of the Meeting, move the adjournment of the discussion.

The President remarked, in reply to suggestions to the effect that it might be convenient to discuss the Paper under two separate heads, that it would be open to every speaker to discuss which sub-division of the Paper he pleased. The matter for discussion was that contained in the Paper as read, and it would, he thought, be somewhat irregular to deal with it in a form other than that selected by the author.

Mr. T. Mosley (Visitor) said that the interest he took in the condition of tenant farmers in England must be his excuse for venturing to address the Meeting. As the son of a large landowner he had made it his business to inform himself, as far as possible, of the views of tenant farmers with reference to the present state of things, and the remedies which, in their opinion, were open to adoption. From what he could gather from the tenants themselves, and from reading the speeches made at meetings promoted by them, their opinion seemed to be that the interest of the tenant farmer—the special knowledge and almost innate skill which he brings to the land—had not been sufficiently considered as compared with the interests of mere capital. In the speeches of Mr. Howard and others the point insisted on was the absolute necessity of importing fresh capital into the business of agriculture. His own view was that the importation of capital alone was not what was wanted for the amendment of our agricultural condition, and in itself would be quite insufficient for the purpose. What was wanted was such an improvement in the farmers' condition that the real tenant—the man trained from his infancy to the calling—should become the occupier of the soil, and not the man who had spent the greater part of his life in some other industry, and had made money sufficient to enable him to go to a landlord and induce him to let him a farm. The class of hereditary farmers knew, as a rule, exactly what was wanted for the cultivation of the land, and, while spending less, gained more than those who had not the advantage of early training in agricultural knowledge.

Passing to another subject, it seemed to him that the agitation for the repeal of the law of distress told not so much against the landlord's as against the tenant's interest. Instances were numerous, where, by the exercise of thrift and prudence, mere labourers had managed, in course of

time, to become large tenant farmers. But without the law of distress the landlord would have had no security for his rent from tenants of this class, and many of these men would have been denied the opportunity of becoming occupiers, and would have remained labourers; or, at best, farm stewards.

The agitation against the law of distress was mainly in the tradesmen's interest. It was contended that they should have the same security as the landlord. But what were the real facts of the case? The landlord very rarely got more than 2 or 2½ per cent. on the capital value of his land (and in many cases where there were good landlords and good tenants, the landlord spent at least one-third of the rent-roll on his estate in improvements), while other persons got at least 12 or 12½ per cent. on their capital.

Two points occurred to him in connection with improvements, both of which seemed to him highly important; one related to the prevention of the disastrous floods of the last few years; the other to the system of applying manure to the land. It was obvious that combined action was necessary for the prevention of floods. Some arrangement might be possible whereby the upland district occupiers might combine with the lowland district occupiers to store, in reservoirs, the superabundant water which came from the clouds, and preserve it for distribution over the land in the dry season. There would be mutual advantage in the adoption of this system, assuming it to be practicable.

With regard to the second point, his contention was, that manure is put too much under the ground—not sufficiently on the surface. He believed it would be found that the ammonia was, on some soils at any rate, carried off by the first heavy rain, passing away into the rivers without benefitting the land. What he would urge was, that the bulk of the manure should be applied more frequently in

the form of top dressing, so that the actual manurial properties should be conveyed straight to the root.

Mr. J. L. Pattisson (Visitor) said that if he ventured to offer a few remarks on that part of the subject which related to Ireland, he did so with the greatest diffidence, but perhaps there were not many present whose fortune it had been, like his, to realize the varied experiences of a resident land-agent in Ireland. He had already, more than once, had the opportunity of arguing some of the questions under discussion with the able author of the Paper; not, indeed, on an occasion like the present, but when traversing with him many broad acres where Irish tenants and tenants' improvements faced them on the spot, and Mr. Watney would not, therefore, be altogether unprepared if he (Mr. Pattisson) did not agree with everything in the Paper.

He was afraid there were three distinct questions involved in the Irish discontent of the present moment. Firstly, the political, or Home Rule, or seditious question—call it what they would—upon which he would not touch. Secondly, the question of small holdings, namely, whether it were possible that a man could get a living as a farmer on the small holdings that existed throughout so large a part of Ireland; and lastly, the question whether the conditions of tenure as between landlord and tenant were generally fair and reasonable.

The author of the Paper had already pointed out that, of the 576,000 tenant farmers in Ireland, 50,000 held less than one acre of land; about 65,000 between one and five acres, and about 162,000 between five and fifteen acres; or in other words, that about 277,000 farmers—nearly half of the whole number of tenants in Ireland—held under fifteen acres of land. None could judge better than those he was addressing whether a farmer who depended, it must be

remembered, upon farm produce, and not upon market gardening, could exist upon the profits of a holding of less than fifteen acres, unless by the aid of casual earnings elsewhere. But, in point of fact, there was little opportunity for the small Irish farmer to supplement his income in this way. The English harvest season had hitherto been his hope, but Members of this Institution would bear him out in saying that the demand for Irish labourers, at harvest time, in England, was decreasing year by year. Thus another resource was gradually being withdrawn from the small Irish tenant, and the fact must be faced that nearly half the farmers of Ireland were striving to live under circumstances incompatible with existence in any endurable form.

The author of the Paper had asked whether what are known as the "Three F's"—viz., Fixity of Tenure, Fair Rents, and Free Sale—did not contain in them the elements of a fair settlement as between landlord and tenant. The "Three F's" would be of very little advantage to those 277,000 tenants to whom he had referred, because, were they to be given their holdings rent free, they would, in most cases, still be unable to make a decent living out of them.

But after all, what did the "Three F's" mean? Fixity of Tenure had a literal and definite meaning; so had Free Sale. But what was "Fair Rent"? Mr. Watney had, with great courage, attempted to lay down a formula by which to arrive at a "Fair Rent." Would it, however, hold good in practice? The other day, an experienced land-agent in the east of England, when asked on what principle he valued the rent of a farm, replied, "on the commercial principle—its actual market price." And surely this was the only real definition of "Fair Rent." It must always be remembered that rent was fixed by the tenants,

not by the landlords—that is, by the demand in comparison with the supply. In England, at the present moment, rents were being lowered because there was no demand, and hundreds of farms were unlet. But in Ireland, for every farm vacated there were five or six applicants. Let him give an illustration.

For some reason, say from the family dying out, a farm falls into the hands of the landlord. Immediately an adjoining farmer comes to the agent and says, "This is very well suited for me, and if you'll let me have it I will pay 25*s.* an acre for the land."

Another adjoining tenant comes immediately afterwards, and says, "The farm is nearly surrounded by my present holding—it is worth more to me than to any one else; and will enable me to find full work for another horse. At present, I have 30 acres, which is not enough for two horses, and therefore I am ready to give 27*s.* 6*d.*, instead of 25*s.* A third, urges, "I have saved a little money—I was born in these parts—I want to be a farmer. If you will allow me, I will take that farm and pay you 30*s.* an acre for it."

The next, perhaps a tradesman in the neighbouring village, would explain that he wished to set up his son as a farmer, and was quite ready to pay any rent that another would; and lastly, the labourer, if there had been one under the old master, would put in his claim, and perhaps, having the least capital, would offer the highest rent of all.

Now which was the fair rent in this case? The agent in his own mind might say the fair rent, from an agricultural point of view only, was but 25*s.* an acre, and yet here were several solvent men and good farmers ready to give more.

Again, Fair Rents implied periodical revaluations, and after all, therefore, Fixity of Tenure could not be certain beyond the unexpired term to the next valuation. For as

Mr. Watney had already pointed out, many circumstances might, even in a short time, increase the letting value of land beyond its agricultural price—and even the agricultural rent that it would answer one tenant to pay, another could not afford.

Again, suppose a landlord were to say, "Very well—as I cannot tell what fair rent is, I will, by way of test, put my farm up for public auction." Was a man who had attended that auction, and bid for and secured the farm, and who knew what he was about, to be entitled to go to the public valuator and say the next day, "The rent of my farm is too high"?

In his speech at Birmingham at the beginning of this year, Mr. Bright made some remarks so extremely pertinent to this matter that he hoped he might be permitted to read them. They were as follows:—"Well, now, I am in favour myself of fixity of tenure and of fair rents. Nothing seems more just; but what they propose is that the rent of the land shall not be fixed by the tenant or by the landlord, or by the two conjointly, but by some third party, who is supposed to be independent, and not interested in the matter. Well, now, that seems, on the face of it, a reasonable proposition; but, to my mind, the reasonableness is only in the proposition. I do not think it would be reasonable, if put in practice. For example, who is to decide what is a fair rent? And what is a fair rent? Can any man tell me the rent upon any given 20 acres of land on which one Irishman could be prosperous? That would be a rent, I fear, on which another Irishman would be impoverished, and, perhaps, ruined. I will not speak of the different qualities of land—that may be accounted for; but how would it be possible to hand over to some lawyer, County Court judge, or some one in authority—to determine the rent of all the farms between tenant

and landowner? At any rate, that is not a principle which we admit in our markets and exchanges, and I think we ought to try every other plan that offers a chance of good before we depart from the universally-observed economic principle, that those who are interested in a bargain should be those by whom it is agreed on, completed, and accepted."

But further, between fair rent and free sale, there remained another undecided element, which must also be settled before the case could be fairly argued. To whom did the so-called unearned increment of the land belong? The Land Act protected the tenant's improvements. If the landlord desired to raise the rent and, thereby, as was constantly said, appropriate the tenant's improvements, he was met, as Mr. WATNEY had pointed out, by the Land Act, which not only prevented him from doing so, but fined him heavily for attempting it. But, over and above the value of the tenant's improvements, there was an unearned increment arising from the general increase of wealth and of population, the ownership of which must be settled before the question of fair rents and free sale could be decided. If this increment belonged to the tenant, all well and good, but if to the landlord—and he could not see to whom else it did belong—then one was confronted by this dilemma. If the rent were fair, there was no margin for free sale. If the rent were too low or too high, free sale appropriated either the landlord's or tenant's property.

Another result might arise from periodical valuations. Everyone knew how difficult it was, when a lease was about to fall in, to get a tenant to thoroughly farm his land for the last few years of his term. Would not the Irish tenants also be tempted, as the period of revaluation drew near, to let their farms run down for fear of an increased valuation.

There were many other points connected with the Irish Land Question, but it was quite impossible, as Mr. WATNEY had observed, to exhaust the subject in an evening's discussion, and he should be sorry to occupy any further time, but he did hope that, in the discussion which would ensue on the subject on a future evening, attention would be given more to what were the real facts in Ireland, and less to theories. He wished to point out that there was absolutely no evidence available to the general English public at the present time of what the state of the Land Question in Ireland really was. Two Royal Commissions were sitting, but neither of them had reported. Until they had done so, no one knew what were the results of the working of the Land Act of 1870. There was a Committee in 1877-78, of which Mr. SHAW-LEFEVRE was the Chairman, to enquire into the working of the "BRIGHT Clauses." It was true they had no power to inquire into the working of the whole Act, but many witnesses were examined; and it was curious to notice that nothing was said to show that the relations between landlord and tenant were in the very unsatisfactory state that they were now alleged to be. That Committee recommended peasant proprietorship—a very large question, with much to be said for it, but if he were to go into it, he did not know where he could stop. He would, therefore, conclude by expressing his thanks for the kindness done him in listening to his remarks.

The vote of thanks to the author, and the motion for adjourning the discussion to the next Meeting (January 10th), having been put and carried unanimously, the Meeting separated.

AT

THE ORDINARY GENERAL MEETING,

Held on Monday, January 10th, 1881.

THE PRESIDENT IN THE CHAIR.

The discussion on the Paper, entitled, "The Land Question in 1880," read by Mr. D. WATNEY at the last Meeting, was resumed.

THE PRESIDENT explained that Mr. SQUAREY, who, as the mover of the adjournment on the last occasion, would in the ordinary course have reopened the discussion, had been unavoidably prevented from attending the Meeting. Under these circumstances, he should be glad if Mr. GREY, as had been suggested, would resume the debate.

Mr. C. G. GREY (Member) said he would commence by making one or two remarks on the question in connection with the present state of the law in England. He did not quite agree with what Mr. WATNEY had said about settled estates, in commenting upon Mr. CAIRD's observation that settled estates caused a restraint upon cultivation. He thought that most Surveyors of experience must admit that the large estates of this kingdom, which were owned by noblemen and gentlemen of considerable property, and which were mostly entailed, were probably the best-managed and most productive lands in the kingdom. But there were instances of small properties, as

most Surveyors of experience were aware, where the owner, being a man of more limited means, had been quite unable to improve his property, and the farms on those estates were in the most deplorable and backward condition conceivable. Whether the law should be altered so as to prevent settlement, or whether there should be some Court like the Irish Incumbered Estates Court (so called when first established, now the Landed Estates Court), he would not say, or to what extent the change should go; but, in the interests of production and improved agriculture, something should be done, he thought, to place settled estates on such a footing that they could be dealt with like other property, and the condition of the tenants on them improved

It was common enough to hear people talking about abolishing "primogeniture." He would never advocate the compulsory division of land between all the sons or children of a family, but he thought that every man should be free to make a will and leave his property as he pleased. The owner of land would, no doubt, in most instances, make some provision for other members of his family; but it was when the owner died without making a will that a case of hardship arose, as the widow and younger members of the family were, under such circumstances, often left utterly destitute, while the property fell to the eldest son, who might be a mere child. Where a man was so negligent as to make no will, the law ought to step in and see that the whole of the property did not go to the eldest son, while the other members of the family were left without provision.

The tendency of the age was to allow much greater freedom of cultivation to occupiers, and any new legislation would probably be in the direction of a further extension. In the North of England, and the South of Scotland, land was almost always held on lease, and in cases of nine-

teen or twenty years' leases the tenant would make a bargain with his landlord as to what he was to receive for improvements, and it was common to provide in such cases certain compensation, which the tenant was to receive at the end of the lease, if he did not take his farm again. He believed it would be found, as a result of the enquiry by the Royal Commission, which had not yet made its Report, that since the passing of the Agricultural Holdings Act there had been a great extension of the system of inserting clauses to compensate tenants, so that, even if that Act were not made compulsory, the tendency of it would be to establish this principle which he believed to be the right and true one.

Turning to Ireland. Ireland had always been a riddle to Englishmen, and even those Englishmen who knew it well had observed that it was a country of extremes of every kind. He believed that if the Land Act of 1870, as applied to Ireland, had been applied to English or Scottish farmers, it would have proved perfectly satisfactory : he did not mean that it would have been faultless, but it would have satisfied the claims of tenants. There was such ample compensation secured to tenants on leaving a farm, for improvements, unexhausted manure, and so on, and, in the case of small farmers, actual compensation for disturbance, that it became a serious matter for a landlord to turn a tenant out, and a small tenant on leaving a farm got, perhaps, more capital than he had put into it; but even that did not satisfy the Irishman. He did not want compensation; he wished to stick to the land, unless he left it by his own free-will when he wanted to sell what was generally called the "goodwill"—a matter entirely of money, and quite independent of any improvements the tenant may have made. Although the recognized system had not extended beyond Ulster, yet purchase of tenant's

goodwill, on leaving, was not uncommon in the South of Ireland. It was often tacitly admitted by the landlord, out of good nature, because the tenant was going away, or because he was about to emigrate, and it provided him with funds to go; but he had known five or ten years' rent given for the goodwill of a farm where, not only the buildings and fences were in ruins, but the land was exhausted, and nothing but weeds growing upon it. When discussing the "Three F's" and the sale of the tenant's interest, it would be necessary, if possible, to distinguish between goodwill and the unexhausted value of the tenant's expenditure and labour on the land. Mr. Pattisson very clearly expressed, at the last Meeting, his views of the matter, and, as he said, Fixity of Tenure was intelligible, and so was Free Sale, but Fair Rent was a very difficult question to decide.

If all lettings were to be settled by some proposed authority, it appeared to him that in time there would be no standard to guide the valuation; but with free letting and free bargaining by landlords and tenants in general, when a case of hardship occurred which it required a disinterested official to deal with, there was a basis to work upon in the letting value of the adjacent farm. The system which existed at present, as Mr. Watney had described it, was this. If the landlord proposed to raise the rent of a farm, and the tenant thought it was too much, he had his alternative to pay it or appeal against it, and the Court decided whether the landlord's demands were exorbitant or not, and in a single case arising here or there the Court had evidence on which to form a just judgment.

It had been clearly demonstrated that an enormous sum had been spent by landlords on improvement of land in Ireland. No doubt a good deal had also been expended by tenants; but this formed only a portion of all that had been

spent, and it seemed to him unreasonable to expect that any legislation should step in to compel landlords to accept rent for land on the basis of its value before the improvements were made by them. Many properties in the South of Ireland were managed as well as in England. In these cases the owners, as well as the agent, looked after the estates. The only difference, in his opinion, was that the Irish landlord was a great deal more long-suffering and good-natured than the English landlord.

There had been so much written about this Land Question of late that it was impossible to read the whole of it. The correspondent of the *Daily News* had contributed some interesting letters; and, if the writer of those letters was an Englishman without previous knowledge of Ireland, he could only say that he had obtained his information very accurately, though he could point out some mistakes here and there. Mr. Chas. Russell, an eminent lawyer in this country, had also written some letters, but a great deal that he had said had been proved to be utterly erroneous.

The question of peasant proprietorship had been much ventilated of late. To talk of the possibility of the 277,000 tenants, holding under 15 acres (referred to by Mr. Watney), living on such an acreage, was absurd, and the results would be suicidal. The very small farmers of Ireland could not live on their farms in bad years. He remembered the famine of 1847—the horrors that resulted, and the exertions which all the residents of any position made to alleviate that distress. People were accustomed to regard the famine of 1847 as the only misfortune of the kind which had happened to Ireland; but, looking back into its history, it would be found that there had been a succession of famines in 1816, in 1821, in 1823, in 1827, in 1831, and in 1832.

In 1835 there was an enormous crop of potatoes after

several years of disease, and that enormous crop induced a general return to potato growing, and the people were content to cultivate them as a staple food and live on them. The crop was so enormous that much of the produce was left in the ground—a fact significant of the Irish character. They were satisfied if they got enough to live on, and would not take the trouble to dig up what they did not want. This enormous crop was followed, in 1837, in 1838, and in 1845, by partial failures and great resulting distress. In 1846 the potatoes failed again, and the misery that followed in 1847 was the result. As long as people attempted to exist on these small holdings, living on potatoes as their only food, it was a moral certainty that there must be periodical famines. He could, if necessary, quote some figures representing the voluntary subscriptions raised in those years of want, and the grants made by Parliament to relieve the distress. The total was an enormous sum, and, had it been expended in assisting the emigration of the people living as they were too thickly together, the country might be now in a more prosperous condition.

The emigration from Ireland after the famine of 1847 resulted in consolidating farms, so that, as Mr. Watney had pointed out, there was 79 per cent. of farms, between 1 and 5 acres, less in 1879 than in 1841; but subsequent emigration had not had the same effect. All the sons and daughters of farmers could not find farms now that they were prevented from subdividing them as formerly, and the only way to improve the social condition of the country was to aid in every way the emigration of whole families,—not individuals out of a family leaving some of them to hold the land.

With farms of 30, 100, or 200 acres, the system of peasant proprietorship, or small ownership, might be fairly tested, for if the people could purchase farms of the kind

they could live on them. There had been cases of lands bought by tenants, under the Church Disestablishment Act, where the owners were doing well. There were very few under the "Bright" clauses of the Land Act, but he thought the experiment might be tried on a larger scale of establishing occupying proprietors by an extension of these clauses of the Land Act. At present, a tenant wishing to buy his own farm must put down one-third in cash, and perhaps borrow it; the remainder he had to pay by instalments, spread over 35 years, with interest, which was necessarily a larger sum than his previous rent.

He had known cases where the person owning the land did not care for the position of "landlord," and had let it on lease for ever, on the understanding that at any time the tenant might pay a fine of £100 down, taking £5 off his rent, and thus, by degrees, becoming the owner of the farm. This system was called in Ireland "fining down the rent," and the fining down might go on until there was no rent left. When once a sufficient sum was paid by the tenant to ensure this prospect, he had a valuable interest in his holding, and, therefore, was certain to go on paying off the interest. There might be some modification of the present law by means of which the payment of the instalments might, subject to the payment of interest, be suspended, throwing the payment of the capital for a time off the shoulders of the occupier, and to a certain extent on his successor; for it seemed to be putting a good deal on a man to make him pay extra rent during his life for the sake of leaving the farm to his son as a freehold.

Some modification in this direction would serve as an inducement to farmers to become small proprietors: he referred, of course, only to cases where the landlord was content to sell his land. He thought the idea of universal compulsory sale of land was monstrous; but many landlords

in Ireland were not only willing but anxious to sell their land, and would probably take any Government marketable securities in payment. It would be a very good opportunity of trying the plan. There were many difficulties in the way of it, no doubt. It would be a question whether the Government would put any restrictions on men letting their farms again. If not, there would soon be a new class of landlords and tenants. A man liked to sublet his farm and get rent without working it, and he might take this course on the first opportunity, unless prevented. Subdivision seemed to come naturally to an Irishman, and a man with a family would subdivide his farm and give each a little bit of it, and so it became smaller and smaller. He had known instances where the farms were subdivided for years before the agent found it out.

He thought it likely, there would be some attempt in the expected legislation, at official fixing of rent in certain cases, and he admitted there were many instances in which it would be right to take this course in order to restrain oppression.

The value of the estates which had passed through the Landed Estates Court since its establishment was over £52,000,000. Many estates had been bought by land speculators, whose only interest was, in many cases, to run up the rent to the utmost. The Land Act of 1870 was some check on them; but the system had continued to prevail in spite of that Act, because the Irish tenant often, rather than go out of a farm or appeal to the Court, was willing to pay the utmost farthing he could, or, at any rate, promise to do so. He thought a man who abused such a power and did such a gross injustice, not only to the tenant, but the country generally (for it fomented agitation), was a wrong-doer as much as the man who used any other kind of property in a way prejudicial to the welfare of

the country at large. In such cases, the Government should interfere, but without making the necessity of doing so a pretext for interfering with the relations and free bargaining of landlord and tenant generally.

The President said that causes had combined to deprive them of the presence of many of the most experienced Members, whose views on the question under discussion would have greatly interested the Meeting. He hoped, however, that those who were present would not hesitate to give their views, having regard to the fact that the discussion must be brought to a close that evening.

Mr. A. Savill (Member) thought that one point which the Members of the Institution should consider carefully, in connection with the surrender-covenants of leases, was the amount which had frequently to be paid to outgoing tenants for oilcake consumed in the last year, as mentioned by Mr. Watney, and for what might be termed temporary improvements. Although he generally acted for landlords, it happened, during the last twelvemonth, that some tenants who were leaving their farms in consequence of differences with their landlords, had come to him for advice. On looking into their agreements he found that some of them provided, on quitting, for the payment of one-third of the cost of oilcake consumed in the last year, and for the manure in addition. Some of these tenants were men of capital, but the sums payable to them, in respect of such claims under their agreements, made it almost impossible to re-let the farms. Some tenants would expend as much as from one to two thousand pounds in oilcake during the last year, for the purpose of obtaining a good valuation.

Past experience had seemed to indicate that too much

was rarely done upon a farm, and this had encouraged people to favour a system which, unless carefully guarded, had a tendency to run into the opposite extreme.

The tenants' capital had been seriously crippled during the last few years, it was necessary, therefore, to be careful to avoid increasing the difficulties of the situation, in re-letting farms, by allowing excessive claims to accrue under farm agreements.

It must not be forgotten that the outgoing tenants were sometimes men of capital, who wished to relinquish farming, and having made up their minds to retire, looked to obtain as much as possible from the incoming tenants. He (Mr. Savill) had a farm, and should like to be paid one-third of the value of the oilcake consumed, and for the manure in addition, as some agreements provided. Few incoming tenants could be found to pay such valuations, and the landlord would probably object to do so, and if the tenants felt disposed to go on again they would probably be able, under the circumstances, to make uncommonly good terms with their landlords for new tenancies. This was an aspect of the question which was apt to be overlooked, and it called for great care on the part of agents.

There was also some little danger in recommending tenants what to grow. Some five or six months ago, Mr. Caird recommended farmers to grow vegetables, and the result had been disastrous to those who had grown cabbages and other vegetables. Many a man of small capital, who had tried the experiment, had found that it cost him, speaking in round numbers, some £20 an acre to produce his crop of cabbages, which was not worth when grown £5 an acre—in fact, not worth cutting! The receipts were less than the outlay for the labour incurred in taking to market. No doubt the case was peculiar to the immediate neighbourhood of the Metropolis, for in country dis-

tricts the cabbages could, of course, have been utilized for feeding stock.

The author of the Paper had said "grow barley," but what would be the result if a great breadth of barley was sown? The price almost immediately went down 50 per cent., and the market was spoiled. He thought the agriculturist would find that he had made a great mistake in procuring the repeal of the malt tax. He had mixed a good deal with farmers lately in various parts of the country, and all seemed agreed that more harm than good had resulted from its repeal. He could only say it was a pity they did not find it out before.

It was difficult at the present moment to know what advice to give on agricultural matters. Take, for example, the clay soils of Essex, where many tenants could be found who had been 40 years and more on their holdings. It was hard on these men to give up these holdings, and, with them, the associations of a lifetime; and, bad as the prospects of farming might at present be, there was no probability that new tenants could be found to take the farms at anything like the rents they were now yielding. It was actually becoming a question, in advising landlords, whether some of the heavy clay soils were worth keeping in cultivation when a tenant quitted. Many advised their clients to do anything rather than farm the land themselves, which amounted to an admission that it was unprofitable. It was difficult to see at present how some of the heavy lands could be cultivated at all, at a profit, even when held at a merely nominal rent.

Mr. T. Chatfeild Clarke (Member) said that the remarks which he had ventured to make at a previous Meeting, with reference to what he considered necessary land reforms, had evoked so many adverse criticisms, that

he addressed the Members on the present occasion with great diffidence. He thought, however, that a contribution so valuable as that made by Mr. WATNEY to the "Transactions" of the Institution should not pass without a word of fair criticism.

Having said this, he must beg leave to express his dissent from Mr. WATNEY's opening statement. Mr. WATNEY had seemed to imply that land and house property stood on the same basis as to their treatment by the State, whereas a moment's reflection would show the contrary. Where land was a fixed commodity in any country, as in Ireland, Scotland, or England, it must be evident to the reason of every man that the well-being and safety of the country at large must be the measure of the mode in which the Legislature should act with reference to that land.

After all, as regarded Ireland, the question appeared to him—though he was not an agriculturist—to be a very exceptional one. A great many Irish owners acted in a way which was unusual elsewhere—a way very prejudicial to the national welfare. They represented, speaking generally, an absentee proprietary, and a large proportion of the money earned from the soil was consequently spent out of the country. The Irish question had been aggravated by past bad legislation and had become further complicated by the existence of a large number of small peasant occupiers. It appeared to him that the only reasonable course was to regard the question of Irish land from an exceptional point of view, and not attempt to argue either as regards the evils or the remedies from the dissimilar conditions prevailing in England.

Admit that the case of Ireland was exceptional, and much of the arguments urged against what he (Mr. CLARKE) regarded as the very valuable letters recently published by

Mr. Russell on this subject, fell to the ground. An eminent lawyer, in whose company he had been that evening, had characterized these letters as a modest but very valuable contribution to the literature of the question. The position appeared to be, that even in Ulster—the favoured Ulster—the tenants were in no way satisfied with the condition of things. And what was the principal ground of objection urged by the Ulster tenants? They said, "It is admitted that we have a very valuable tenant right, but the landlord, being able to increase the rent, may deprive us of a very large proportion of this tenant right, if not wholly destroy it." That seemed to him to be one grievance which the new Land Bill ought certainly to meet.

One of the main results of a policy, based upon some of the views urged by Mr. Russell, would, no doubt, be to put the land of Ireland, sooner or later, into the possession of the people. Was not that a result that most thinking men would consider desirable?

No sensible man would advocate holdings of, say, 5, 6, or 8 acres; but to say that an Irish tenant farmer could not live on a much smaller acreage than the English farmer seemed to him in no way consistent with known facts. Therefore, he thought, as he had said before, that the question of Ireland was somewhat exceptional.

One of Mr. Russell's suggestions was that lands such as those, owned by Corporations, especially when heavily mortgaged, should be so dealt with that they might be brought into the market, and offered in farms of reasonable size, purchaseable by small tenants. Many in that room had, no doubt, read Mr. Tuke's interesting pamphlet on the Irish Question. Instances were given in the pamphlet where tenants had informed the author, with great delight, that they had only one more instalment to pay to make the lands theirs for ever.

Other suggestions made by Mr. Russell seemed to him very reasonable. That gentleman had advocated, in his letters, the reclamation of waste land; but the great point on which he dwelt was, that the tenants should be enabled to acquire their holdings, from the present owners, at a fixed rate, say, 4 per cent., or 25 years' purchase of the rental. This involved no great unfairness so far as he (the speaker) could judge, of course under no principles of confiscation. Indeed, a great majority of the Irish landlords would be well contented to receive an even smaller number of years' purchase on a fair estimate of the rental value.

He felt convinced that the only true principle of dealing with the Land Question in Ireland was to seek to convert Irish tenants into small proprietors. No people were more passionately attached to the soil, and the carrying out of such a policy would create, among Irish tenants, what was so much needed—an interest in the maintenance of order; and would do more than anything else to render possible the introduction of necessary reforms in the administration of the country.

Rightly or wrongly, the whole people of Ireland believed that they possessed an interest in the soil which was distinct and apart from the landlords' interest, and this universal conviction had to be reckoned with, and could not be ignored. He was not prepared to commit himself to a definite adhesion to the principle of the "Three F's," as they involved many and difficult questions, which might not in the end work well. It was a social necessity in Ireland that some means should be found of enabling a large number of the present occupiers to become proprietors of the soil on a scale consistent with their useful existence on the land, and it would be necessary for people, in discussing this question, to recognize the fact that the tenants of Ireland would never be satisfied until they were free from arbitrary eviction. The

tenant's right to be compensated for what he had put into the land, though recognized, was now lost in the event of eviction for non-payment of rent.

He was surprised to hear Mr. GREY say that the landlords of Ireland had done more on the soil than the tenants. Surely, it was a well-known fact that (contrary to the custom in this country, where most of the permanent improvements were done by the landlords), in Ireland, it was the tenant who erected the bog-hut, and cleared the stones, and did almost everything to the land in the way of enclosing, draining, &c.

The author had not attempted to deal with the question of English land, except in the most cursory manner, and had addressed himself rather to the processes of agriculture, and the changes in this respect necessary to enable the English farmers to cope successfully with foreign competition.

He (Mr. CLARKE) was not a practical agriculturist, but he could not help thinking that the agricultural depression from which England was suffering would be the means of bringing about some much-needed and most salutary reforms, such as the abandonment of the custom of primogeniture, and alterations with regard to the law of entail and limited ownerships, and a reduction in the expenses attending the transfer of land by the introduction of some system of registry, whereby the land could be dealt with in small parcels, and come to be owned by a larger number of people.

Mr. W. BIDDELL, M.P. (Visitor), said that his opinions were the very opposite to those of Mr. CHATFEILD CLARKE, who had suggested that the peasant proprietor or small occupier was to be the cure for Ireland. He (Mr. BIDDELL) thought we were never likely to get the small peasant proprietor, and that, even if we did get him, he would not be

worth having. So far as his experience went, the small occupying owner was one of the men who worked under the most grinding conditions of poverty of anyone engaged in agriculture. When speaking of the peasant proprietor, the quantity of acres he was to own should always be mentioned. The occupying owner of 6 or 8 acres was a man doomed to a lazy life. He could not be expected to live on so small an acreage; and to keep up the land he must pay interest on the money which he had not, and which he had consequently to borrow. It appeared to him rather paradoxical to advise the tenant without capital to buy the land. It reminded him of the advice which a young lady in her teens gave him when a young man—viz., "If you haven't any whiskers, cut them off till you have some."

His own opinion was that small farming was one of the banes of Ireland. It should be remembered that where small occupations abounded there was always keener competition, and it was this very competition which had brought Ireland to its present state. The small occupiers were content to live with a cow and pig on potatoes, and it seemed impossible for them to reduce their expenditure with a view of acquiring the capital to enable them to improve their position. It was as much as they could do to keep body and soul together. There was only one way, or rather two ways, so far as he could discern, of abating competition in Ireland—one, to endeavour to bring more land into cultivation; the other, to diminish the number of competitors. The latter object could only be effected—it seemed a hard thing to prescribe for people fond of their country—by promoting their emigration to Canada, or some other new field.

It would be far better to do this than to endeavour to secure them the ownership of land in Ireland.

The Irish Question, be it remembered, was a periodical

affair. It came up every five or six years, and he thought, rather than go on giving temporary relief for constantly recurring evils, it would be better to show the way to a better country where the conditions of existence were less hopeless.

It would soon become a question what we were going to do in England. The difficulty of procuring tenants at more than nominal rentals, on heavy clay-lands, had been alluded to by a previous speaker. He imagined that this was due not so much to a decline in the value of the land as to the diminished capital of the tenants. If he were advising landlords (and he had advised many) he would say, keep your tenants, and don't part with one of them if he be an honest man. Help him to keep his feet in these times of difficulty, and you will probably find the advantage of having done so when things revive.

Mr. H. C. Newmarch (Associate) said that he did not think that so very despairing a view of the prospects of English agriculture need be taken. He was afraid that any English landlords who might have been present would have gone away with a gloomy view, particularly as regards the prospects of the clay-lands. No doubt this prospect was not good; but the heavy clay-lands, after all, only represented a small portion of the soil of the country, and he hoped that circumstances would improve very much, even as regarded those lands. This fact was quite certain, that the grain-producing area of England was diminishing every year, and he believed it would prove a good thing for the country that this was so. Bad seasons had combined with other causes to cripple the farmer's means; but he believed that there were circumstances which, when more fully developed, would attract fresh capital to agriculture and make it again productive—he alluded to the meat-producing capabilities of England. He saw no reason why

meat should not again become as profitable to the farmer as it used to be. He was speaking without figures, but he was under the impression that it cost no more to produce than it had ever done. Labour was, no doubt, dearer than formerly, but rents were very low, and with this advantage over those of many years ago, if the farmer had suitable premises, there seemed, as he said, no reason why prosperity should not return to him.

It did, however, appear to him that the burdens put upon the land were fast drawing the tenant farmer into further difficulties. Take, for instance, the severe burden of the Poor's Rate. He thought it unwise that this should be thrown entirely on land. In some districts farmers were obtaining a reduction in their assessments on account of temporary allowances in their rents, made in some cases by landlords unwilling to turn out old tenants, and for other reasons, and thus, in many cases, the reduced rent did not represent the market value of the land. No doubt it might be said that the tenant who had not obtained a reduction, or, at all events, an equivalent reduction, of rent, could appeal against his assessment on the ground that his holding was really worth no more than his neighbour's who had got his rating reduced; but this was always an invidious thing to do, and the results were uncertain. The Highways Act, again, pressed heavily on farmers at times, and constituted another burden which helped to keep them down. These were matters which should not be overlooked in discussing the Land Question of 1880.

Mr. G. D. Yeoman (Member) had not come prepared to take part in the discussion. He regretted that so little had been said in the course of the discussion upon the English side of the Land Question. One thing which had not been referred to was the condition of those English farmers

who were holding leases for seven, fourteen, or twenty-one years, and whose position during these five years of unprecedented depression, when reductions of rent were taking place all round them, was rather a hard one. There were cases within his knowledge where they would be very glad indeed to resign the leases, if the landowner would take them.

As barley had been referred to by one of the speakers, he might mention the case of a farm of 500 acres on a barley soil, in the Eastern Counties, where the tenant had informed him that his average barley crop last year was two quarters to the acre, and it sold at 25*s.* a quarter, or 50*s.* an acre. He also told him that he paid each year £1,300, and the whole of his crop, wheat and barley, last year brought in £700; so how he was to meet his rent and other expenses it was hard to say.

He quite agreed with the remarks which Mr. Watney had made on pages 99, 100, and 101. He observed, however, that he had not laid stress on the importance of having the artificial manure properly analyzed. He had heard of cases where both cake and manure had been purchased, and afterwards found to be almost useless, and he should strongly advocate more caution in buying. It was also thought at the present time that hay and straw should be allowed to be sold off the farms. He quite agreed with that, provided that cake or artificial manure was bought with part of the proceeds, and vouchers were produced for the satisfaction of the landlord or the agent at the audit; especially in the case of farms near large towns. It was urged by Mr. Watney that, in the last year, one-third of the cake should be allowed. He (Mr. Yeoman) went further, in some instances, and allowed one-third in the last year but one, and two-thirds in the last year; such cake being also used by the cattle and sheep, and not being above the average quantity used in previous years. One

case came under his observation where the landlord agreed (foolishly he thought) to pay two-thirds of the last year's cake bill, and one-third of the last year but one, without limit as to its use; and the tenant fed his cattle, sheep, farm-horses and pigs on cake, and ran up a large bill for the landlord when he left his farm. Such cases, however, were exceptional.

He agreed with the remarks made about taxation. It always seemed to him hard that the landed interest should bear the burden of taxes in so much greater a degree than funded property, or property other than land.

He would advise, at the present time, that every unnecessary outlay should be avoided by the tenant, and every form of waste; that covered sheds, which were of very great benefit, should be provided, both for sheltering the cattle and also for protecting the manure from rain. He saw no reason why heavy lands should not be either laid down to grass, permanently if they were clean, and, if otherwise, for three or four years, and then ploughed up again. The expense was much less than that of cultivating them, and there was a good deal of heavy land on which it was not worth while attempting to grow corn. He would also advocate dairy farms, especially near large towns, for he believed that there was a large amount of profit to be realized by the dairy farmer.

Mr. W. Rex (Associate) said that, although the circumstances of England and Ireland were very different, the principle contended for was practically the same, and that principle was that tenants should have security for their outlay. The Irish were agitating for the recognition of this principle, but the tenant farmers in England were quite as much in want of it, although they were not agitating to such an extent. That was what Mr. Watney referred to

at the commencement of his Paper, when speaking about "the unearned increment in the land." It seemed only fair and right that every man should have secured to him whatever addition he had made to the value of the land, and, no doubt, agriculture would be in a much better position in this country if some arrangement of the kind were made, either by law or by private agreement—it would not much matter which, so long as it was uniform—and it would follow, as a matter of course, that more capital would be invested in land by the tenant farmer; and with such security, farmers would be able, in times of depression, to borrow money. This principle appeared to him to lie at the root of the whole matter. He did not see that it would be such a great advantage to the tenants (and it had been often demonstrated in that room that it would not) to become owners of the soil; but, if the tenant could have his improvements secured to him, he would be in as good a position as if he were the actual owner.

The last speaker had referred to leases. The lessees had, he thought, during this depression been in a much better position than was often supposed, because they could keep up the cultivation of the soil, knowing that, after the depression was over, they would reap the benefit of so doing. He had known cases where the tenant farmer—in fact, it was the usual thing during similar depressions for the tenant farmer to do so—had run his farm out, saying, "In a year or two I will give it up," and then, prosperous times having returned, he had to get it up again, and a very great loss to him had accrued. He had known this occur twice on one farm, during bad times, when the price of produce was lower than any price that had ruled during the last five years, and when the crops also were inferior.

Reference had been made to the demand for land in Ireland, and the competitive prices which had resulted, but

in this country there was also a great demand for land, for instance, by tradesmen from London and other large towns, who had made money and wanted to go back to their native counties and become owners of land. These little estates had become scarce in recent times, having been absorbed into the larger estates, the owners of which could borrow money at perhaps 3 or 3½ per cent., where the small purchaser would have to pay 5 per cent.

The small farmers also liked to invest their savings in land if they could do so, and all these things showed how desirable it was that some facilities should be given for enabling a larger number of persons to become owners of estates in this country, as well as in Ireland. No doubt the effect of repealing the law of primogeniture would be to occasionally throw estates into the market, but this, in itself, was insufficient; and it would be well if, without any violent change, some means could be found of increasing the number of owners of the soil. He presumed that no one would be likely, in these times, to advocate confiscation on the ground that the soil belonged to the State. By whatever means the land had been brought to its present productive value, whether by the outlay of landowners or their tenants, the property in that improved value must of course be recognized, but in future it should be given to no one but to the persons, whoever they were, that had called it into existence.

Mr. Thomas Buckland (Visitor) thought the two great causes of the present depression were, first, the enormous amount of rain which had fallen during the last few seasons, and, secondly, the American competition, both with regard to beef and wheat.

He thought the English farmers were placed at a disadvantage by the restrictive covenants of their leases. The

covenants should be more open, leaving the tenant free to farm his land according to his own judgment and experience, so long as he farmed it fairly and kept it in good condition.

It was, no doubt, necessary that, during the last year or two of the tenancy, the occupier should be bound to farm his land in the manner approved by the landlord; and if he could show, to the satisfaction of the landlord, that he had certain capital remaining in the land, in the form of unexhausted manure, it should be reimbursed him. He thought that, if some greater security could be provided for the farmer, the owner would frequently find less difficulty in letting the land.

Some of the land in Essex to which Mr. Savill had referred, required four and even six horses to plough it. Where this was the case, it would never pay for the labour; and the sooner such land was put into grass, the more remunerative it would be to both tenant and landlord.

Mr. Watney, in reply, said he was rather disappointed at not hearing the opinions of some of the senior Members of the Institution, but he presumed they were unavoidably absent, or, perhaps, they hesitated to touch upon questions about to be legislated on. One thing, at all events, was pretty certain, and that was, that any legislation which was demanded and given to Ireland must bear to some extent on the welfare of this country, and he did not think it could be said that Ireland stood in such an altogether exceptional position as had been asserted. He admitted that there were special features in the case as regarded Ireland, but what was done there, and what was affirmed there as the just mode of dealing with the rights of landlords and tenants and with the land itself, must, in his judgment, to a very material extent, regulate any future legislation in this country. No doubt Ireland was a country which was

very little understood on this side of the water, and he thought that Mr. Russell's recent letters bore evidence that he knew neither Ireland nor the Irish. Those letters were written for a certain purpose, and, like many others on the same subject, were very clever; but he thought it was patent that they were chiefly written by men who took a very superficial view of everything they saw and heard.

A great deal had been said about Fixity of Tenure, but it must be borne in mind that about one-half of the tenants in Ireland occupied holdings of less than 15 acres statute measure; and, it must also be remembered that the holdings in Ireland were not so well kept as land in England, and, consequently, there was a great deal more waste. Out of this 15 acres, it must be taken for granted that 33 per cent. at least was waste, or occupied by buildings, roads, or fences, and some 10 acres was about all the tenants had to cultivate. How was it possible for a man to exist and bring up his family on 10 acres, or less, of indifferent land, and yet it was urged by very many persons that the tenants of the smaller holdings were those who required the greatest concessions! It seemed to him that Fixity of Tenure, as far as such holdings were concerned, was perfectly absurd. If Fixity of Tenure were given to some of those having larger areas, where the landlords were willing to sell (he did not mean Fixity of Tenure so as to make the landlord a mere rent-charger, but to make the present occupiers peasant proprietors, or small holders), he could understand that some benefit might accrue to the country; but what advantage would it be to anyone to enable a man who held 10 acres of cultivatable land to become the owner? Such a man would be worse off than before, for he would have to pay two rents instead of one. Small holdings had caused more distress in Ireland than all the other evils put

forward so prominently by the agitators, and the only remedy, in his opinion, was emigration, promoted and aided by the State.

One cause of distress in Ireland at the present time was that there were now so many more reaping and other labour-saving machines in England. He believed it had been estimated that something like 150,000 of the smaller tenant farmers and labourers in Ireland used to come to England in the summer for the harvest, and they would take home some £10 apiece. It was clear that, with reaping and labour-saving machines now so much in use, there was not so much foreign labour required; and the last few seasons had been so disastrous to the English farmers that they could not employ the Irish labourers as heretofore, and hence a serious loss to Ireland.

It had been said that absentee landlords were the curse of Ireland, but those who knew Ireland would not endorse that so fully, but would agree with him that the large landowners in Ireland were the best of landlords, although in many cases they might be absentees. From statistics already given, it would be seen that the occupations were very small, and required much supervision, and it was impossible for the larger landowners to have their estates managed as could be done in England, where the agents could go down to collect the rents twice a year, and only spend a day or two on the estates. In Ireland there were very numerous resident agents, with their staff of clerks, surveyors, and bailiffs. Resident agents in Ireland were men of considerable importance—mostly magistrates, and gentlemen of good social position. They were also men of education and culture, and they represented the owner, in most instances, very efficiently. Therefore, he contended that absentee landlords were not always the worst. As a rule, they kept the arterial drainage in order,—without which

a large percentage of farms would be absolutely valueless, —as well as all estate roads which were not county roads. They also gave large subscriptions to schools and to ministers of various denominations, as well as to local charities and dispensaries; therefore, the absentee landlords did not draw money out of the country without benefitting their tenants as they were popularly supposed to do.

He thought one great remedy for the present state of things would be to insist that no tenancy should exist in Ireland without a written agreement. So much went by word of mouth. Men got into the box and swore directly contrary the one to the other on a matter of fact which happened, perhaps, 10, 20, or 30 years ago, and he was sure it would be agreed that it was almost impossible to recollect, with any exactness, what happened in a conversation 10, 20, or 30 years previously. One man had his version, and another his; and, therefore, he thought it would be generally admitted that it would be well for the country if no agreement should be allowed except in writing. He knew of a plan which was adopted by Lord Dufferin on his Clandeboye Estate, in County Down. He (Mr. Watney) had been over that estate, and it was certainly one of the best managed that he had seen in Ireland. When a tenant wanted to make improvements on that estate, the resident agent went over the farm to ascertain whether the contemplated improvements were beneficial, and, if so, permission was given for their execution; and as soon as they were completed to the satisfaction of the agent, he endorsed the nature of the improvement and the cost on the agreement, so that, when the tenant's lease expired, his interest in such improvement might be taken into consideration in fixing the new rent, or on a change of tenancy.

The two points which he hoped would have been more discussed in that room, and on which the whole question of

land in Ireland hinged, were these: 1st. Did improvements ever really exhaust themselves? And, 2nd. What was fair rent? It was believed in this country that improvements did exhaust themselves; but if an Irishman spent £50 in 1880, he would consider that £50 would still be due to him in 1900 if he quitted his farm, and that it remained intact. The question, therefore, for legislation was to define when improvements became exhausted. If a tenant drained land in this country it was generally understood that in ten or twenty years he had no further claim, and that any benefit from such expenditure had then accrued to the landlord; but in Ireland it was claimed on behalf of the tenant that, notwithstanding any lapse of time, that expenditure formed part of his tenant right, and that the landlord had no interest whatever in it.

The other question was, what proportion of the produce of the soil should go to the landlord in the shape of rent, and what proportion to the tenant for his labour and skill? He had hoped that those points would have been taken up and discussed, and if they could be settled, then, in his opinion, the whole question in Ireland of the relations between landlord and tenant would likewise be settled.

He had been asked why he laid so much stress on having a Government Valuation in Ireland at the present time, and why the rent should be settled by Government interference. But that was not his meaning at all. He contended that the Government Valuation was always looked upon in Ireland as being the basis of value; but it was clear that, at the present time, the basis was an erroneous one, and had been so for many years past. What he intended to advocate was that a new Government Valuation should be made which should be a sort of basis or guide for landlords and tenants on which they could make their own bargains. What he would also advocate was that the State

should not interfere with free contract, but that landlords and tenants should be free, as heretofore, to make their own arrangements. Let them reduce them to writing, and it would be found that the Irish tenants, who are very keen in their own interests, would, in nineteen cases out of twenty, make arrangements with their landlords without any interference. Where no agreement could be made within six months, the settlement of the rent might be left to the sole arbitration of a person appointed by the Board of Works; and it would be found that the difficulties, said to be insurmountable, would very speedily disappear. He did not think that any case had been substantiated to show that legislation was necessary which should supersede and abrogate free contract as between landlords and tenants.

There were a few words he wished to add about the English part of the question. He thought, as had been said by one gentleman, that the want of capital was the true cause which hindered agriculture at the present time; and, as the result of the depression, English farmers had, no doubt, lost from 20 to 30 millions of capital. That was a very serious drain on one class of the community, and, until that capital had been replaced in some way or another, he did not think there could be much return of prosperity.

Analysis of artificial manures had been also touched upon, but it was a very common occurrence for farmers to buy artificial manure with a guaranteed analysis; so that if the manure did not prove equal to the vendor's prospectus, the farmer rejected it. It was well known that any Member of the Royal Agricultural Society could obtain an analysis from their Professor for the very moderate fee of 10*s*.

There was one more point he wished to urge upon all land-agents, and that was that owners should be encouraged to do more ornamental planting. He spoke as an auctioneer

now, and he knew that estates were so much more readily sold if they were ornamentally planted. If only a small sum annually were expended in judicious planting, it would not merely improve the sporting capabilities of an estate, but would render it more picturesque and attractive, and, as a natural consequence, so much more valuable if brought into the market to be realized.

The President, in summing up the discussion, thought he might safely say that it had not been established that any practical legislation which it was open to the Houses of Parliament to adopt would, to any appreciable extent, touch the present depression in English agriculture, or do much to relieve the dissatisfaction, poverty, and misery which prevails amongst Irish agriculturalists.

It had been urged that some alteration was needed in the law as regarded settled estates and primogeniture, but it had not been shown that any alteration of the kind would touch the present English agricultural depression; and he might almost go so far as to say that no practical suggestion had been made in reference to legislation that could do any appreciable good to Ireland. The tendency of every speaker, both on this and on former occasions, was to suggest caution, and the general feeling in this respect was indicated, he thought, by the absence of some of the most experienced Members of the Institution. He would say with reference to probable legislation, as he would say with reference to any transaction in business, that it was exceedingly desirable that no attempt should be made to legislate unless those who prepared the Bill dealing with these questions had a practical knowledge of every aspect of the matter to be legislated on.

With reference to small owners or peasant proprietors, every man acquainted with the country districts, either of England or Ireland, knew perfectly well that, taken as a

class, none worked so hard, or led such anxious lives, as the little pettifogging farmers who owned the land they occupied. They had to work as hard as the agricultural labourer, and endure a load of anxiety from which the agricultural labourer was free. But, dismissing merely sentimental considerations, he thought it might be said with confidence that it had not been shown that an agriculturalist could make more of his capital by investing it in the purchase of the fee-simple of land than he could make of it by putting it into agriculture, as a tenant farmer, unless he were a man of large means. He had endeavoured to establish this proposition in his Opening Address (and it had not been in any way refuted), that, unless it could be shown that money put into a trade did not pay better than money invested in agricultural land, the advocates of small ownerships failed to prove that it was better for the small farmer to be the owner of his land than merely the occupier of it.

In considering the "Three F's," it might be asked what it was that was wanted for Ireland? They had the right of free contract between the two parties—the freeholder, who could control his land and let it out in such portions as he chose, and the tenant, who contracted to take it at the rent agreed upon between them. It was as open to the lessee or the owner, if he desired it, to spend money or not on the property in Ireland as it was in England, and no legislation was needed to enable him to do either.

It was also necessary to bear in mind that land might pass from the agricultural to the building stage, as Mr. Pattisson had pointed out on the last occasion, and that there were other circumstances, such as the construction of a railway through an estate, some portions of which were let, say, at 30*s.* an acre, but which, by reason of the making of the railway, would become

worth a rent of, perhaps, £8 or £10 an acre. If there were fixity of tenure, would the agricultural tenant have that land at the agricultural rent for ever? Would the Government fix a fair agricultural rent on that land, and leave the tenant in possession of the increase in the value due to the railway or to the building operations? Consideration of these matters would show how difficult it would be to legislate in such a way as to secure a just result to all parties. No legislation would ever turn poverty into prosperity, in the absence of thrift, industry, and skill; and if the Irish would not work, it was useles to look to legislation to help them.

What had been proved by the discussion was that the agricultural portion of Ireland was too thickly populated with farmers, and that, as a consequence, the farms were too small. There was only one remedy for this state of things—the remedy suggested by Mr Biddell—emigration. If it were true that, in some parts of Canada and New Brunswick, such farms as we had here were to be had for a small sum of money, help by the State, if given at all, should take this direction.

The question of local taxation had been referred to by one of the speakers. It must be remembered that the principle of parochial assessment was perfect equality; and, if a person had special means, such as recent compulsory reduction of rent, of showing that the land in a district was only of a certain value, and upon such evidence the Assessment Committee reduced the assessment of that land, then the occupiers of adjoining land, provided the quality were not superior as agricultural land, could appeal against the assessment on the ground of inequality without reference to their rents. That had occurred in more than one union, and no fresh legislation was wanted, therefore, for this object.

Something had been said about growing cabbage. No doubt it was unwise to grow too much of it, but nevertheless, cabbage was sometimes a very useful crop.

With regard to Mr. Savill's remarks with reference to compensation for unexhausted improvements, he might observe that many lawyers held that the landlord was not bound to pay the outgoing tenant the amount of the valuation. If the landlord had covenanted to pay, in the event of an incoming tenant failing to do so, it was, of course, another thing; but it was contended that there was no custom of the country compelling him to do so in the absence of a specific agreement to that effect, whatever might be the effect of the Agricultural Holdings Act, out of which the parties could, of course, contract themselves.

It had been suggested that the landlord might often help the tenant by advancing half the valuation. Unfortunately (and many landlords would not be ashamed to acknowledge it), these times pinched the landlords as much as the tenants, and it was often a very difficult thing for landlords to make advances to the tenant in actual money,—for the outgoers had to receive money, and the money must come from somewhere. It was one of the difficulties with the landlords that these times had so diminished their incomes that they could not make these advances as they did formerly.

The Meeting then adjourned.

No. 93.]

RURAL WATER SUPPLY;

WITH ESPECIAL REFERENCE TO THE OBJECTS OF THE

PUBLIC HEALTH WATER ACT, 1878.

By JOSEPH LUCAS, F.G.S. (Associate).

Read at the Ordinary General Meeting of the Institution of Surveyors, *January 24th*, 1881.

THE PRESIDENT IN THE CHAIR.

"'Tis perched upon the green hilltop, but close
Environed with a ring of branching elms."
. . . . . "The dweller in that still retreat
Dearly obtains the shelter it affords.
Its elevated site forbids the wretch
To drink sweet waters of the crystal well;
He dips his bowl into the weedy ditch,
And, heavy laden, brings his beverage home,
Far fetched and little worth."—Cowper, *The Task.*

In order to appreciate the magnitude of the interests involved in the subject of Rural Water Supply, it should be borne in mind that the population of the rural districts of England and Wales in 1871 amounted to 10,135,640, or nearly half the total population of 22,712,266; and that the rural districts of England alone numbered 9,312,337, out of a total population of 21,495,131. In a remarkable Paper, "On the Increase of Population in England and Wales," by Mr. R. Price Williams, C.E., the author estimates the population of the rural districts in 1881 at 11,082,339, out of a total population of 25,936,800.

Mr. Williams gives the rate of increase per cent. of the town population in the decade 1851-61 at 16·32, and that

of the rural districts, 7·29—rather less than half; whereas Mr. Lewes, in his Digest of the Census of 1871, says of the same decade, "the growth of the towns was more than four times as fast as that of the rural population." Both authorities are, however, agreed that in the decade 1861-71 the urban districts grew more than twice as fast as the country districts. Taking, then, the rural population at about 11,000,000, or rather less than half the total population, the amount of the loans to Rural Sanitary Authorities sanctioned by the Local Government Board during the year 1879, for water supply, was only £75,473, and to Urban Authorities £293,880.

In the district comprising the whole of North Wales, Radnorshire, and two Unions in Cheshire, during the seven years following the passing of the Public Health Act, 1872, only £23,290 were spent upon water supply by Local Authorities. Of this the Local Government Board remark that the amounts would have been considerably greater but for the fact that in many instances, where a waterworks scheme had been in contemplation by the Authorities, it had been taken up by a private water company.

For the purposes of water supply to the rural districts larger measures will have to be taken than such as, "in some cases, to collect water from the roof and store it; in others, to dig a new well; in others, to render the existing supply good by puddling; in others, to bring spring water to a village or hamlet by means of a pipe," to use the words of Mr. A. H. Brown, M.P., Chairman of the Committee of the House of Commons that sat to consider the Public Health Act (1875) Amendment Bill, in a Paper read by him at the Congress on National Water Supply, at the Society of Arts, 1878, in explanation of the Bill. There can be little doubt that had the projectors of that measure had the advantage of reading Mr. Williams' Paper before

the Bill was framed, its provisions would have assumed a materially different shape.

The requirements of to-day embrace large areas which are wholly incapable of providing for themselves in any shape or form, and which, as we shall see, can only be efficiently dealt with by means of Watershed Boards.

The Public Health (Water) Act, 1878 [41 & 42 Vict., ch. 25], aims at enforcing water supply either (1) on the owners of occupied houses, subject to certain limitations, or (2) on the district or contributory place within which the houses are situated. The Act was chiefly intended to be complementary to the defective Clause 62 of the Public Health Act, 1875.

After the formal clauses, Section 3 requires every Rural Sanitary Authority to see that every occupied dwelling-house within their district has, within a reasonable distance, an available supply of wholesome water, sufficient for the consumption and use for domestic purposes of the inmates of the house. In order to throw the responsibility on the proper officials, the Authority acts only on the report of their inspector of nuisances, or their medical officer of health. If, on the report, the Authority deem that a new supply is required and can be provided for a capital sum which, at 5 per cent., yields 2*d.* per week, they may serve the owner with a notice requiring him to provide the supply. The capital sum is £8 13*s.* 4*d.* When, however, a supply is difficult to obtain, power is given to charge such other cost not exceeding a capital sum which, at 5 per cent., would produce 3*d.* per week, as the Local Government Board determine to be reasonable. The capital amount is £13.

Small as these figures appear, an examination of the cost actually incurred in obtaining water from springs, wells, and tanks, will show that they are not only not very low, but may be very high charges.

Springs.

To take first the cases of which the details of cost are given by Sir Thos. Dyke Acland (Appendix 9 to Report of Committee on Bill) of a group of villages in the Exmoor valley, near Porlock Bay. I made a special visit to the district in October. The villages are all supplied by gravitation from springs issuing from lofty hills of Devonian sandstone—Porlock Hill being 1,218 feet; Lucott Hill, 1,512; Dunkery Beacon, 1,707; and North Hill, 1,011. The hill-tops and much of the sides are dry moorland, the sandstone of which they are formed being a dull-red, fine-grained hard rock, everywhere much fissured, and at the surface broken into small fragments. It thus forms an admirable filter for rain absorbed. The villages are supplied by stand-pipes, except Buddle Hill, where there is a catch-pit, or dip-well, through which the water constantly flows.

At Doverhay, West Luccombe,* and Bossington,* there are farm houses; those at the two latter places are omitted in the following Table as the rent they pay is not stated. For all I know, there is no charge actually made to the cottages, but the following Table shows the water-rents which would produce 5 per cent. interest on the prime cost, as well as the rate per cent. on annual value of the cottages that this rent equals (col. 10), and what the rate of interest would be if the authorized 2*d.* per week or 3*d.* per week were charged. To compare these with London charges: The Lambeth Company may charge $7\frac{1}{2}$ per cent. on annual value under £20, and $7\frac{1}{2}$ per cent. on a £4 house is 6*s.* per annum, or 1·38*d.* per week. Taking the four villages, all of which fall under the highest Lambeth scale, all but West Luccombe would have to be charged at or below the lowest Lambeth rate per cent. on annual value to produce 5 per cent. interest on prime cost of waterworks.

This would equal respectively *per cent. of annual value*—Bossington, 4·4;* West Luccombe, 7·6;* Buddle Hill, 3·02; Doverhay, 5·72. All are £4 houses but Doverhay, which are £4 10*s.* The Lambeth Company pays 6½ per cent. on capital. If the £4 houses were paying the authorized 2*d.* per week, they would be paying 10·8 per cent. on annual value, or 3·3 per cent. higher than the highest authorized Lambeth rate, which is the highest in London, and 7, 12, and 17 per cent. on capital respectively, as against the 6½ per cent. of Lambeth.

TABLE I.

Name of Village.	No. of £4 Houses	PRIME COST. Total. £ s. d.	PRIME COST. Per House. £ s. d.	INTEREST. Water Rent returning 5 per cent. on Prime Cost. Per Ann. s. d.	Per Week. Pence.	Rate per £ on £4 rental s. d.	Per cent. of Prime Cost paid by Water Rents at 2d. per Week.	3d. per Week.	Foregoing Water Rent equals per cent. on annual value of house.
Bossington*	23	82 2 6	3 10 10	3 6½	0·81	(abt.) 10½	12·2	18·3	4·4
West Luccombe*	7	42 9 3	6 1 4	6 1	1·4	1 6¼	7·1	10·0	7·6
Buddle Hill	9	21 16 3	2 8 5	2 5	0·56	0 7¼	17·9	26·8	3·02
Doverhay	Rental. £4 10 37	195 0 0	5 5 5	5 2¼	1·19	1 1¾	8·22	12·5	5·72
„ Farm	£15 Rent paying £2 per ann.			raises the rate of Int. f			rom 8·2	2to9·24	
Charges authorized in Clause 3	—	—	8 13 4	8 8	2	2 2			
	—	—	13 0 0	13 0	3	3 3			

WELLS.

If recourse be had to a well, in the case of a single cottage, not only must the depth be within a strictly prescribed limit, but the finding of sufficient water must be a matter of absolute certainty, else the limit of cost will be exceeded, and the amount thrown away.

Sinkings or Dug Wells.

The cost of well-sinking is difficult to state. Well-sinkers are reluctant to give general scales of charges, or estimates of any kind, except for actual work, but from the Tables in Mr. Rawlinson's Paper of "suggestions" (revised to 1878), I find a 4-ft. chalk well may be dug 50 feet deep in the chalk for £7 10*s.* in North Hants, which would leave £1 3*s.* 4*d.* for bucket, rope, well frame, and winch handle. A pump could not be provided within the cost for a well at that depth, which may be regarded as the extreme depth attainable under the most favourable circumstances at the cost. For two cottages, built together, the amount available would be doubled, £17 6*s.* 8*d.*, which, at 5*s.* per foot, would admit a well of 60 feet deep, allowing £2 10*s.* for buckets and chain. These figures relate to country labour. Three cottages together might possibly afford a pump. Four or more could certainly do so.

A 4-ft. well, lined with bricks, is quoted in a London estimate at 14*s.* per foot for first 20 feet, and 2*s.* per foot extra for each additional 20 feet. Thus a well, 20 feet deep, so lined, would cost £14, which, for a pair of cottages, would leave £3 6*s.* 8*d.* for buckets, frame, &c.

Borings.

As far as borings are concerned, the above-cited Paper quotes, for a 3-in. hole, 4*s.* a foot for the first 100 feet in chalk.

By a modern improvement, a pump barrel can be let down a bore pipe of larger diameter, and this is sometimes convenient.

Feeling the great advantage of being able to quote cases from practice, in preference to loose scales of cost, I prevailed upon Messrs. Legrand & Sutcliff—with whom I have frequently been in consultation upon borings in progress—to furnish me with the materials from which Table II. is constructed. Out of seven cases, all fall far below the 2*d.* per week per house, and all but one of those seven below $\frac{1}{2}d.$ per week.

Table II.—Showing the Cost and Quantity of Water obtained by Boring.

Works executed by Messrs. Legrand & Sutcliff.

	Date.	Depth of Bore.	Formation at Surface.	Number of Houses.	Quantity supplied. 1,000 gallons per day.	Total Cost.	Average Cost per House.	Average Water Rent to produce 5 % on prime Cost.	
								Annual.	Weekly.
		Feet.				£ s. d.	£ s. d.	s. d.	Pence.
1.—THE CHALK.									
KENT. Orpington	1876	25	Chalk	20	6	19 0 0	0 19 0	0 11·4	0·22
ESSEX. District of Grays and West Thurrock	—	Average 40 ft.	Chalk	120	100	260 0 0	2 3 4	2 2	0½
Downshall Farm, Ilford	1880	208	London Clay	—	4 (10 hours)	—	—	—	—
HERTS. Lodge to Hatfield Park (Lord Salisbury)	1876	43½	Chalk	1	3 (10 hours)	21 0 0	—	—	—
HANTS. Aldershot Waterworks	1880	240	Bagshot Sands	1,175 in 1871	140 (10 hours)	360 odd	(at 1,200) 6*s.*	0 3·6	0·069
2.—THANET SAND.									
KENT. Lewisham (Mr. Larkins)	1876	At bottom of dug well, 18 ft. (Special)	Woolwich Beds	2	3·6	7 1 4	3 10 8	3 6·4	0·8
ESSEX. Chadwell Heath (Mr. Oldaker)	1878	193	London Clay	1	1·2	80 0 0	["Dark fine running sand," perhaps in the Woolwich Series.]		
3.—LOWER GREEN SAND.									
KENT. Snodland	—	147	Gault	18	3	109 16 0	6 2 0	6 1·2	1·02
BUCKS. Ellesborough	1869	301	Chalk	148 in 1871	3·5	250 0 0	—	—	—
LINCOLNSHIRE. Skegness	1879	2 bores, each 130 ft.	Alluvium on Chalk	79 in 1871	100	800 0 0	[Population in 1871, 349. Present Population, "3,000."]		
4.—GRAVEL.									
ESSEX. Colchester (Mr. Baker)	1876	18	—	6	4	8 5 7	1 7 7⅙	1 4·58	0·32
YORKSHIRE. Hellifield	1880	Average 30 ft.	—	40	(Over 10 gals. per min. each)	129 8 8	3 4 8⅗	3 2·83	0·74
WORCESTERSHIRE. Moseley Hall (Mr. Elkington)	1876	27	—	1	3·5	11 10 0	—	—	—
5.—SHALE?									
Cregrina Board Schools	1878	39	—	Board Schools	4	16 18 8	—	—	—
6.—ROCK?									
IRELAND. Cairn Enniscorthy	1878	77	—	Village Pump	3	72 14 0	—	—	—
7.—NEW RED MARL (Keuper Series).									
SOMERSET. Public Well, Langport	1878	90	New Red Marl	—	7·2	99 0 0	—	—	—

Tanks.

As a last resource, and as we shall see farther on, under pressure, there is the tank for storing rain-water. Dr. Ballard thinks the tank should hold four months' supply. Mr. R. H. Paget, M.P., assumes that a tank for a single cottage to hold three months' supply, about 1,200 gallons, would cost about £8 10*s.*, and observes, "Twopence per week added to the cottage-rent would pay more than 5 per cent. on the outlay." Mr. Rawlinson estimates the cost of a tank to hold 5,625 gallons—more than 4½ times as much as Mr. Paget's—at only £9 5*s.* 6*d.*, 5 per cent. per annum on which is 9*s.* 3¼*d.*, or 2¼*d.* per week. These figures contrast most unfavourably with those for springs and wells. Mr. Grantham remarks * that the tank should be constructed in two parts, so that one can be cleaned while the other is full.

A tank holding 5,625 gallons contains 84 days' supply, at 66·9 gallons per day, which, at 2½ gallons per head per day, and 5 persons to a house, would supply 26·7 persons and 5·3 houses; or at 4 months' capacity, and 10 gallons per head, would contain 100 days' supply for 1 house with 5½ persons, and this for a rent of 2¼*d.* per week. The water in tanks is always unpalateable, often impure; and where owners are compelled to adopt tanks, they may regret having to employ the most expensive and most unsatisfactory method of obtaining a water supply. I have repeatedly found them where wells abound, and where a well would have cost less, and would yield an unfailing supply of unexceptionable water.

It may be useful to compare with the foregoing Tables the cost of supplies to some villages, quoted by

* Roy. Inst. Brit. Architects, 26th Jan., 1874.

Table III.

	Dr. Ballard, *Appendix* 2, p. 124.	Mr. Clutton, *Min. of Evid.*, p. 75.		Mr. Easton, *Min. of Evid.*, p. 84.		Dr. Frankland *Min. of Evid.*, p. 42.	Sir H. Johnstone, *Min. of Evid.*, p. 105.	Mr. Paget, M.P., *Appendix* 9, p. 184.	Mr. Rawlinson, *Appendix* 5, p. 177.	Mr. Symons, F.R.S. *Trans. Inst. Surv.* Vol. 9, p. 136.	
Assumed available Rain .	20 inches	—		—		25 inches	—	20 inches	100 days' supply	20 in.	26·63 in.
„ Area of Roof .	400 sq. ft.	—		450 sq. ft.		56 sq. ft. per head	two cottages	450 sq. ft.	for 1 house, or	180 sq. ft.	3300 s. ft.
Collected on roof per annum	4000 galls.	4368 galls. per cottage		—		728 galls.	—	4500 galls.	1 day's supply for 100 houses at 5½ persons	1800 glls.	46,513gs.
Collected on roof per diem .	10·9 „	—		—		nearly 2 galls.	—	12·3 „		5 „	127 galls.
Number of Persons . .	4	—		5		—	10	5	550	2	[15]
Gallons per head per day	2·7	2½ galls.		—		2	—	2½	10	1½	[7·5]
Capacity of Tank (galls.)	1387	2500	1800	1200	2400	728 per head	500gs.(45c.ft.)	1137	5625	—	—
Period of Storage . . .	4 months	—	—	115 to 120 days	—	1 year	—	3 months	1 day	—	—
Cost of Tank	—	£10	£9	£10	£14	—	—	—	£9 5 6	—	—
Spouting and Pump . .	—	—	£3 15*s.*	£2	—	—	—	—	—	—	—
Total Cost . .	—	—	£12 15*s.*	£12	—	—	—	—	—	—	—

Sir Harcourt Johnstone and Mr. Easton, in the Minutes of Evidence:—

	No. of Question.	Population.	Capital lost.		No. of Houses.	Average Cost per House.
			Total.	Per head.		
			£	£ s. d.		£ s. d.
Sir Harcourt Johnstone	1930	500	1040	2 8 0	[100]	[12 0 0]
	1937	270	300	1 2 0	[54]	[5 10 0]
Mr. Easton	1410	400	400	1 0 0	80	5 0 0
		1500	2300	1 10 4	[300]	[7 11 8]

The figures in brackets result from assuming 5 persons to a house. Three out of the four cases fall far below the 2*d.* per week scale.

Sections 4 and 5 contain the appeal clauses.

The first two grounds require no comment, but the third, "That it is impracticable to provide the supply at a reasonable cost," may serve to raise a question as to the means by which the magistrate to whom the appeal is to be made can inform himself whether any or what sources of water supply, subterranean or other, are available at a reasonable cost. If necessary, it is true, an inspector of the Board may take evidence before the Justices, but the cost of such an enquiry would necessarily make it inapplicable to any case smaller than that of a village. The fourth ground of appeal is that the Authority ought themselves to provide a supply of water for the district or contributory place in which the house is situate or to render the existing supply of water wholesome.' The appeal in this case is to the Local Government Board, "because they alone have the staff and knowledge requisite to decide whether the Authority should provide waterworks," as Mr. Brown, M.P., explains in his Paper. This is true as regards Medical and Engineering Science; but there is a class of

knowledge that plays an important part in the decision of both questions under this head for which there is not, I believe, any special provision. The evidence that the Authority ought themselves to provide a supply should consist in a map of the basin or basins in which their district is situate, with all existing wells and works marked thereon, and a proper report on the capabilities, nature, and position of the sources made after a careful survey. No one Authority can be expected to make such a survey on its own account, and all Sanitary Authorities have need of such information.

Polluted Wells.

With respect to the second point—that of rendering the existing supply of water wholesome—the power of the Sanitary Authority to effect this is contained in Section 70 of the Public Health Act, 1875, under which the Authority may apply to a Court of summary jurisdiction for an order to remedy any well, tank, or cistern, &c., which is so polluted as to be injurious to health; and thereupon the Court may make an order directing the well, tank, cistern, or pump, to be permanently or temporarily closed, or such other order as may seem proper.

I drew attention to this Section at the time, as follows:—"The law in this case is weak, inasmuch as it divides the power of dealing with a polluted well between the magistrate and the Local Authority. The consequence is that the magistrate exercises his right of ordering the well to be closed, and the Local Sanitary Authority, having disposed of the case, does not care to proceed to exercise its powers, and see that the defective drains, cesspools, or other sources of contamination, are made right," Mr. A. H. Brown, M.P., prior to the passing of the Act of 1878, said: "In considering the defects of the existing law, the first point which is

brought to our notice is that, although the Public Health Act provides the means of closing wells when the water is bad, there is no provision for enforcing a supply at the cost of the owner or occupier when a well has been closed, or when there is no supply at all." Of this the case just cited is an instance. Though Section 62 of the Act of 1875 was apparently intended to cover all such cases, it was ruled that it could not be put in force unless there were waterworks in the district. This was one of the defects which the Public Health (Water) Act, 1878, was designed to remedy. In the town of Bridgwater upwards of five-and-twenty polluted wells have lately been closed by authority, and the owners have been compelled to take the Corporation water under this Section.

In the well-known case of *Corrie* v. *Mayo*, in which the tenant vacated a house let at £200 a year in consequence of polluted water, if the defendant landlord had not actually covenanted to supply pure water to his tenant, he could not have been made to do so. The case was at first decided in his favour, and it was only on appeal that the covenant in the lease was held to be conclusive. In this case, the water-closet of a large house was almost over the well in the chalk, and the drain-pipe passed close to it. The well was carefully lined with cement from top to bottom. Just before the second trial in 1877, I made a careful examination of the well, and explained, though too late, to the owner the ineffectual nature of the remedy adopted. In 1878, an instructive case of pollution occurred at Little Horsted, Sussex. An ancient farmhouse, known as Wicklands, had been converted into a gentleman's house as valuable as the last-named, and was inhabited by a family. Serious illness emptied the house of its tenants, and the case came before the magistrates. In February 1879, I was called in to devise a remedy. I ascertained that the well was sunk in

the Upper Tunbridge Wells sand, a porous stratum consisting of sandstone and marl; that the well was 53 feet deep, with 35 feet of water, and I was told that it traversed a bed of blue clay 6 feet thick, at a depth of about 35 to 41 feet. This is the Grinsted clay, which is impervious to water; while the marl and sandstone above it are pervious. I was further told that the spring which supplies the well was struck near the bottom of the well in the Lower Tunbridge Wells sand below the Grinsted clay. My observations showed that there are also at some times of the year weak springs above the clay. I noticed that, while the surface of the water was 18 feet below ground, there was a somewhat copious influx at 14 feet from the top, or 4 feet above the water. The dip of the strata is towards the S.W., and the flow and fall of the subterranean water in the same direction. In the line of steepest fall, on the high side of the well, and less than 30 feet distant from it, there was a cesspool. This cesspool was therefore so placed that any leakage from it must go into the well. I concluded that the spring below the clay was pure; that the contents of the cesspool flowed through the upper marl and sandstone partially diluted when the upper springs were flowing; but when they were dry it entered the well as it left the cesspool. The recommendation was to clean out and fill up the cesspool, and carry the drainage of Wicklands to the S.W., which would protect the well against further pollution, and render the occupation of a valuable house secure.

Section 6 is, perhaps, the test of the workable value of the Act. It relates to new houses, and provides that it shall not be lawful in any rural district for the "owner of any new or rebuilt house" to occupy the same, or permit it to be occupied, until he has obtained from the Sanitary Authority of the district a certificate that there is provided within a reasonable distance "an available supply of wholesome water."

If the Authority refuse such a certificate, the appeal is to a Court of summary jurisdiction. "Any owner who occupies a house, or causes or permits it to be occupied in contravention of this Section, shall be liable, on conviction by a Court of summary jurisdiction, to a penalty not exceeding £10.

In September 1880, the owner was summoned at Alton for allowing a house to be occupied at Binsted without having a certificate from the Sanitary Board that there was a sufficient supply of water. The inspector of nuisances said, on the 24th May, the house, which is one of two cottages, was without any provision for water except by a hole in the garden. "Water could be obtained," he said, "400 or 500 yards away." After proper notices, an inspection was made, when it was found that "a tank was built, but there was not a sufficient water supply," &c. Ultimately, the case was dismissed, upon the defendant undertaking to pay the expenses.

Again, on November 2nd, at Odiham Petty Sessions (the Right Hon. G. Sclater-Booth, M.P., late President of the Local Government Board, Chairman), the owner of a house at Farnborough, erected since March 1879, was summoned for allowing it to be occupied without a certificate. The case was dismissed on the defendant paying the costs, £1 2*s*., and undertaking to obtain the required certificate within a month.

At the same time and place, the agent to a gentleman was summoned for a similar offence, in respect of two cottages at Grubbs' Farm, Dogmersfield. Defendant applied on the 29th September for a certificate, but it was not granted until the 22nd October, and the house was occupied on the 19th October. Case dismissed.

It is clear from these cases that, as a last resource, a tank has to be resorted to, and that, if that be not sufficient, no further pressure can be put on; also that Sanitary Autho-

rities ought to see that certificates are granted at the earliest possible moment, and without unnecessary delay.

Section 7 provides for periodical inspection of water supply. It imposes upon every Rural Sanitary Authority the duty of ascertaining, from time to time, the condition of the water supply within their district. "The Authority, or any of their officers, or any person duly authorized in writing for that purpose by the Authority," if there is ground, "shall be admitted into the premises *for which such supply is required*, or *from which the water supply may be derived*, for the purpose of ascertaining whether or not such house has such a supply within a reasonable distance." What is a reasonable distance? The person reporting is not bound to specify more than that there is not a supply "within a reasonable distance." "There are two conditions," says Mr. Brown, "which I ought to mention with regard to the supply of water—first, that it shall be wholesome; secondly, that it shall be at *a reasonable distance*. These two points are not defined. I wish it were possible to define them, but they are left to the discretion of the magistrate, in whom I think we may safely place confidence." Now, the distance which the Committee appear to have considered "reasonable" is practically defined in Section 9, under which a Rural Sanitary Authority having provided a stand-pipe, "may recover water-rates or water-rents from the owner or occupier of every dwelling-house *within two hundred feet* of any such stand-pipe, *in the same manner, in all respects*, as if the supply had been given *on the premises*." "The object," says Mr. Brown, "is to place the Local Authorities in the same position as Water Companies." The clause would appear to need some further amendment, however, if it authorizes a charge for such a supply at the same rate as if it were brought into the house. The 200 feet might be down a very steep hill, in which case the water would have to be

raised by hand, but in any case it is unfair to expect people to pay as much for their water if they have to fetch it a distance of 200 feet in all weathers, as they would pay if it were laid on inside the house—as it is in Sir Harcourt Johnstone's village waterworks in Yorkshire.

Section 8 gives the Local Government Board power to fix a general scale of charges for a district, when applied to by a Local Authority to define a "reasonable cost," under Section 62 of the Public Health Act, instead of being obliged, as under that Section, to fix such cost with respect to each house. In their Report for 1879-80, they say: "We have fixed five such scales during the year."

Section 10 was inserted by the late Government with a view to amend the prevailing practice in regard to defraying the costs of a water supply. Before this Act was passed a Sanitary Authority might, under Section 56 of the Public Health Act, 1875, charge water-rates or water-rents upon the consumers, but they were not obliged to do so; if they did so and these were not sufficient, or failing that course in the case of an urban district, the cost or balance might be paid out of a general sanitary rate, and in the case of a rural district by a rate for special expenses. To take instances—Sandgate (Urban), population 2,000, is supplied from Honeywood spring at cost of £3,400. The water-rents amounted to about £10. Balance charged to general district rate. Dronfield (Urban), population 2,454, supplied direct from the Upper Linacre Reservoir of the Chesterfield Water Company, after expending £1,688 "for temporary supply," charged the whole upon a general district rate, though there are public wells and pumps within the district, and, therefore, no doubt private ones. Now, under Section 10 of the Act of 1878, on the application of ten ratepayers in an urban district, or five in a contributory place in a rural district, the Authority is bound to charge water-rates

or rents for all water supplied by them. It is not to my mind by any means clear that this removes the ground of opposition to schemes for water supply, that the cost of waterworks, which are limited to a village or a particular part of a parish, will be thrown on the rates for the whole parish; or, that it removes the great stumbling block to the practical application of the Reservoirs Act (40 and 41 Vict., c. 31), which gives power to limited owners to charge their estates with the expenses of waterworks with the consent of the Enclosure Commissioners, and to enter into agreements with Sanitary Authorities for the supply of water in bulk. It seems to me to raise a knotty legal question. Before the passing of the present Section, owners who had provided waterworks under that Act or without an Act were liable to be rated for the supply of houses belonging to others who had failed in their duty. Sir T. D. Acland (Appendix 9 to Minutes of Evidence on Public Health Act Amendment Bill) gives an instance: "The little town or village of Porlock is in two parishes, Porlock and Luccombe. The owner of the portion called Doverhay in Luccombe offered to supply that part of the town with water at his own expense, on condition that the town of Porlock should be made a separate contributory district. The proposal found favour with the Local Government Board, but a violent opposition was raised, chiefly by one large ratepayer, and the Rural Sanitary Authority were induced to withhold their concurrence. The Doverhay portion was in 1876 supplied with water from private funds. It followed that, when further works were executed by the Rural Authority for Porlock, the outlying district of Bossington was rated, though its inhabitants were already supplied, and derived no benefit from the new expenditure.

Section 10 falls short of the recommendations of the

Committee, which was, "That in all cases where the Local Authority provides a water supply, water-rates or water-rents should be charged upon the consumers; the maximum charge to be 2*s.* in the pound on the rateable value of the house, and the minimum, 6*d.* in the pound." The object of this suggestion is to secure that no profit made by the sale of water shall be carried to the credit of the general rates, unless the consumer is charged at the minimum rate of 6*d.* in the pound; and, secondly, that the water shall not be cheapened by the general rates, unless the consumer has been charged at the maximum rate of 2*s.* in the pound. "Sixpence in the pound," says Mr. Pell, M.P. (Appendix 10), "on a cottage rated at £4 per annum is 2*s.* per annum, or about ½d. per week, as against 8*s.* 8*d.* per annum, the equivalent of 2*d.* per week; and 2*s.* in the pound, is 8*s.* per annum, as against the same 8*s.* 8*d.*" The maximum charge authorized under Section 3 of the Act of 1878 is 3*d.* a week, or 13*s.* per annum, capitalized at 5 per cent.—that is, £13. These figures show that the prices suggested are not unreasonable.

Under Section 11, the Local Government Board may, if they think fit, invest any Urban Sanitary Authority with all or any of the powers and duties which are by this Act assigned to a Rural Authority; otherwise, the latter might try to get made urban, under Section 276 of the Public Health Act, 1875, in order to escape those duties. Since the passing of the Public Health Act, 1872, which first authorized these Orders, 302 Rural Sanitary Authorities had got made urban before the end of 1879. Upon this, the Local Government Board remark in their Report: "The number of applications for these Orders is a satisfactory indication of the interest taken by Rural Sanitary Authorities in the urban portions of their districts."

B.—SUBJECTS NOT DEALT WITH IN THE ACT, BUT TREATED IN THE REPORT OF THE COMMITTEE.

Compulsory Powers.

Some subjects not treated in the Act are dealt with in the Report of the Committee. The first of these is the compulsory purchase of water rights. Power to effect this was apparently conveyed by the 176th Section of the Act of 1875; but after one or two Orders had actually been issued by the Local Government Board, and confirmed by Parliament, a Committee of the House of Lords decided that the Section in question did not convey the power required. The Committee recommend that the Local Government Board should have power to issue Provisional Orders, which, when confirmed by Parliament, would confer upon the Local Authorities the power to purchase water rights compulsorily, such Provisional Orders to put in force the Waterworks Clauses Act, 1847.

It is evident that, until such a power as this is given, it is useless to attempt to effect a water supply for many waterless rural districts, which are too poor to proceed by a Private Bill. There is an inconsistency in the facts that the Local Government Board is in the habit of issuing Provisional Orders, to put in force the powers of the Lands Clauses Consolidation Acts, 1845, 1860, and 1869, with respect to the purchase and taking of lands otherwise than by agreements for the purposes of works of water supply, and that they are without powers to issue Orders for the compulsory purchase of water rights.

The Bridgwater (Corporation) Water Act, 1877.

It is said that the Bridgwater Corporation originally went to the Quantock Hills for a gravitation source, but, on failing to agree with the landowner, they were driven to

go down to the flat, from which they have to pump the water over a standpipe 80 feet high to obtain the requisite pressure for the town. This case is instructive in two ways. *Firstly*, it is monstrous that a large town should be unable to compel an owner to sell his water rights, and should be put to a permanent expense in pumping in consequence, and that they should have to abandon a pure for an impure source; and, *secondly*, had the source been as originally contemplated, the head would have covered a large district now quite without any water supply, including a group of some 6,000 people at Highbridge and Burnham, fourteen miles distant.

The next suggestion relates to Section 52 of the Public Health Act, 1875, the effect of which is to restrict a Local Authority from providing a water supply when within the limits of supply of a Company. It is: "That a Sanitary Authority should have power to guarantee 10 per cent. for three years of the cost of the mains and pipes to be laid down by the Water Company, or 7 per cent. until the water-rates and water-rents are sufficient to pay the Company that rate of interest on the cost of the mains and pipes." It is a pity that such loose powers as that of occupying a large outlying district without the limit of the original demand, and to the exclusion of the Sanitary Authorities, were ever given; for it may happen that the Rural Sanitary Authority may have at their command ample sources of supply within their own district, and which naturally belong to them, and which are quite independent of those of the Company. The effect of this may be that the rural districts are obliged to pay a very much larger sum for their water brought to them from a distance than it would have cost them to supply themselves from their own resources, or that the Company, which was originally empowered to supply the distant town from local sources, and which obtained a mere

extension of area as regards distribution from those sources, actually makes use of the local resources which lie within the district and basins of the Rural Sanitary Authority, and which should properly belong to them without obligation. It should, as it appears to me, in future be incumbent upon a Company to prove that their proposed overlapping district extends over an area which possesses no local resources, and is, therefore, and always must be, incapable of supplying itself. The Sanitary Authorities should have the opportunity of showing, if they possess local resources, that they are willing and able to supply their district, and of objecting to a Company occupying a district beyond the limits of the first demand.

If, when an extension district has been granted to a Company, the Company have undertaken to supply the area within a reasonable period and fail to do so, not only should it be lawful to the Local Authority to furnish a supply, but they should also be entitled to claim compensation from the Company for the loss of time so caused during which they might have been receiving water rates and rents, and for the breach of contract.

The last recommendation of the Committee, that when a Company or Corporation goes to a rural district for water, Parliament, before giving the powers sought for, should be informed of the wants of the district from which water is proposed to be taken, or through which the main passes, in order to make provision for these districts, has already been applied in individual cases, notably, the Manchester Thirlmere supply.

In proposing that the Local Government Board should report to Parliament, the Committee suggest that the Report should state the probable *wants* of the district from which the supply is to be taken and of those through which the mains pass; whether it is necessary for the districts to

obtain a supply from the proposed works; and "any other information which it is important for Parliament to know"; but nothing is said of the *capabilities* of the district from which the supply is to be taken, or of the country along the line of main, except in these general terms.

Rising from the perusal of the Report of the Water Commission, and of the 6th Report of the Rivers' Commission, the first question everyone asks is—Where is pure water to be had? It is remarkable that it took the latter Commission six years of the most elaborate chemical investigations to arrive at the same results as old ANDREW BORDE stated in HENRY VIII.'s reign, 338 years ago. It would have saved some trouble to have copied him outright.

ANDREW BORDE—DYETARY OF HELTH, 1542.

Water is not holsome sole by it selfe for an Englysshe man. . . . Water is colde, slowe, & slack of dygestyon.

1. The best water is rayne water, so be it that it be clene and purely taken.

2. Nexte to it is ronnynge water, the whiche doth swiftly ronne from the eest into the west upon stones or pybles.

3. The thyrde water to be praysed is ryver or broke water the which is clere ronnyng on pibles and grauayl.

4. Standynge waters the whiche be refresshed with a fresshe spryng is commendable.

5. But Standyng waters and Well-waters to the which the sonne hath no reflexyon, although they be lyghter than other ronnynge waters be, yet they be not so commendable.

RIVERS POLLUTION COMMISSIONERS, 1874.

As soon as water quits the vaporous condition and assumes the form of clouds and rain, it becomes more or less contaminated When it reaches the earth, it acquires further impurities.

Class I Rain Water.

Stored rain water, generally, is very badly polluted.

Class II. Upland surface waters:—Div. 1. From non-calcareous strata. Div. 2. From calcareous strata.

Class III. Surface waters from cultivated land:—Div. 1. From non-calcareous strata. Div. 2. From calcareous strata.

{ Class IV. Shallow Well Waters.
{ Class VI. Spring Waters.

Class V. Deep Well Waters.

Throughout the Public Health Acts, and in the Report of the Committee on the Bill of 1878, knowledge of sources is everywhere assumed; it is taken for granted that all that has to be done is to get water. "The means," says Mr. Brown, M.P., Chairman of the Committee, in his Paper, "by which water is to be supplied, is not set forth in the "Bill, but is left to be settled by the circumstances of each "particular case." With all respect, I submit that some of these cases are of a large kind, for the treatment of which there can be no adequate machinery short of the Watershed Board. How are large areas of country on the Oxford clay, with its innumerable villages, or the Kimmeridge clay, on which the village of Denchworth has already laid its troubles before the world, to be supplied at all except by such means? The case is best illustrated by an example.

The Quantocks are distant from the Mendips 16 miles from ridge to ridge. Between the Quantocks (which are Devonian) and the Mendips (Carboniferous Limestone) there is an alluvial flat, ten miles wide, near Bridgwater Bay. In the midst of this flat, four miles S.W. of the Carb. Lim. of Bleadon Hills, there rises to a height of 457 feet a hill of lias capped with a small mass of Oolite sandstone. This is Brent Knoll. The marlstone of the middle lias forms a tableland perhaps 100 to 150 feet above the plain, but it runs down under the alluvium at the eastern side. At this end, rises the Knoll. There are no habitations on the hill, but there are villages on the flat all round it, East Brent and South Brent being under the hill. The houses all round the hill were, and still are in most cases, supplied from shallow wells at the back. The villages on the plain are numerous. These, with the outlying farms, are dependent upon the "rhines," or ditches, with semi-stagnant water, here used as boundaries. As the name *rhin* is a Celtic one, some

at least of these must be of great antiquity.* Ancient custom is everywhere urged in defence of drinking them. The farms on the flat are nearly everywhere pasture land. Though some of the highest-rented land in England—the parish of East Brent, 3,000 acres, producing a rental of £14,000 a year, or nearly £5 an acre—it is some of the worst off as regards water supply. Nevertheless, it is surrounded by hills capable of supplying the whole district, if treated as a whole; but, in the absence of any united Board with adequate powers to take up the matter in the interests of the whole area, each village is expected to provide for itself. Lympsham, one mile north of Brent Knoll, is now pressed by the Rural Sanitary Authority, and the village, having met in vestry, begged six months to advise themselves whether they could supply the village from wells.

Burnham is a rising watering place, and close by it is Highbridge; the two together number some 6,000 inhabitants, but the population is rapidly increasing. At present they are without a water supply but such as can be obtained from shallow wells. They are, however, seeking to provide one. East Brent is, at the present time, in the position of being the only village on the plain that has a supply of wholesome water. Up to 1865, when Archdeacon Denison took the matter in hand, fever was endemic in the village, but they have had none since. What he then did is shown by the following extracts from a memorandum, addressed to the parishioners, November 26th, 1866.

"1. That the years when there has been most sickness and death in the parish, have been the years when there has been least water.

* In Welsh, *rhin* is a channel which carries off lesser waters: in draining, a name for the secondary dykes, which receive the small ditches and convey the water to the "Great Channel."—Owen's Dict.

"2. That the parish is mainly dependent upon the hill for supply of water.

"3. That not one drop of the water coming from the hill finds its way into the parish in a pure state. It is all tainted with sewage.

"4. That the supply of water from the hill is very large. It is delivered by three watercourses. . . . I find at this time the supply from the one watercourse and springs above the Vicarage fields is not less than 72,000 gallons in 24 hours. At times it is very much more, and is never, I believe, less than half that amount during eight months of the year. For the remaining four months, it is much less, but even in these a heavy rain brings down a great quantity of water.

"5. That the water, as it leaves the hill, is of excellent quality."

After estimating £200 for reservoir, and £616 for distribution, the Archdeacon concludes: "The whole expense would not, I think, exceed £1,000. I should propose to borrow this amount from the Loan Fund Commissioners on the security of the rates, to be paid off, with the interest, in thirty years. To do this would take a rate not exceeding 2*d.* in the £."

Now, 2*d.* in the £ on a £4 house is little more than one-sixth of a penny a week. But in those days, under the Sanitary Act, 1866, and the Sewage Utilization Act, 1865, the Vestry was the Sanitary Authority. Consequently, the Archdeacon met with no support. Upon that, he proceeded to construct a chain of reservoirs one above another, nine in all, along the above-named watercourse, like those at Wotton House, Surrey. In 1865, the Archdeacon put down a boring in the marlstone above the third reservoir, on the site of the basin of the Old Miller's Spring (belonging to East Brent Mill mentioned in parchments of Glastonbury

Abbey, A.D. 1180), to a depth of 30 feet. This supply was carried by a separate pipe to a tank holding 8 hogsheads, and provided with a pump in the village.

In 1877, he bored, at the top of the lowest pond, 125 feet into the lias, and just below constructed a large tank in the field for the reception of the water coming from the bore. In the village below, he placed a second tank holding 8 hogsheads, and provided with a pump entirely served from the above boring. None of the pond water is now used.

This year, the Archdeacon dug a shaft 30 feet in the marlstone, on the table land at the foot of the Knoll proper, and secures a present (November 20th, 1880) additional supply of 4 gallons a minute therefrom. This supply is not yet utilized. It is noteworthy that the village of Lympsham sends a vessel holding 100 gallons to East Brent for water every week, I believe. The whole area could be easily and cheaply supplied by a Board having administration and rating powers over the natural group of basins of the Axe, the Brue, and the Parrett, all of which flow through the alluvial flat, and which contain superabundant sources.

In the Area of outcrop of a porous stratum, the success or failure of a well depends upon one of two hydro-geological conditions—the first, that in which the supply is wholly derived from the rain absorbed upon the area of outcrop; the second, in which a well or boring draws upon a head of water collected upon the surface of the stratum at some proximate point. It is easy to know which of these conditions obtains at any point.

As regards the first case, ARISTOTLE ("On Meteors," Lib. I., cap. 13) sums up the true principle in very few words: "As springs are under hills, this proves that that place discharges water, because there is a gradual conflux of water from many drops, and thus the sources of rivers are produced." This spring, therefore, represents a certain

contributory area, within which any well depending solely on percolating rain can only obtain a small supply, according to its position in the basin.

Where these basins are large, and the strata limestone or calcareous sandstone, the volume of the spring may measure millions of gallons per diem, and wells near it may draw large supplies.

Of such basins, as long as there are only isolated houses, each should have its well, if the depth admits—otherwise, tanks are necessary—but where villages or towns occur, the water should be taken at the lower part of the basin and pumped to a reservoir for distribution, as Sutton, Epsom, and other places have done.

As regards cases of larger supply, where anything like millions of gallons a day are wanted, these can only be obtained (with the above exceptions) near to large bodies of water already collected upon the surface of the stratum.

In Egypt, where there is no rainfall to complicate the question, the only source of supply to wells is the infiltration of the Nile, so that wells cannot be made very far from it, or the canals. Were there a moderate rainfall, as in England, we should doubtless find numberless wells with small supplies from that rain, like many of our own, beyond the Nile district.

1,000,000 gallons per day, at 6 inches absorbed per annum, requires the total subterranean annual average supply of 4·201 square miles; a circle round the well with that area has a diameter of 2·3 miles. A quantity equal to a depth of ·0164 inches of rain over the whole area must converge to the well daily, some of it coming from a distance of 1·15 miles round the well, to the exclusion of all other wells within the ring.

Having been called in by the engineer advising the Dorking Water Company, I pointed out that the only site for a

well, capable of yielding the supply required, was in the Folkestone sand, down by the Mole, near Castle Mill, unless the chalk was resorted to.

The most favourable rocks for subterranean supply are limestones or calcareous sandstones.

On April 13th, 1880, I heard from Messrs. Bowley and Son, Cotswold Brewery, Cirencester, that they were on the point of abandoning a boring by Messrs. Legrand and Sutcliff, which was then 115 feet deep, all but the top 26 feet being principally through clays. This was the first attempt at a boring in that locality. Upon examining the country, I found that the River Churn, which flows over Great Oolite limestone, from Baunton to Bowling Green Farm, north of Cirencester, flows from that point through the town over Forest Marble clays for about a mile, when the Great Oolite is again thrown up to the bed of the stream by a large fault. Now, it is just north of this fault that the boring is sunk. Finding the Great Oolite much fissured, and in itself favourable for transmission of water, which was supplied to it by the Churn, the conclusion was that the boring at the Cotswold Brewery, if continued, would draw upon this, and from the low situation of the brewery that it would rise near the surface. After a little delay, the boring was continued. On April 30th, they struck a water supply at 122 feet, when the chisel jumped down 10 inches, and the water soon after rose in the pipe to within 5 feet of the surface. The boring was stopped at 128 feet, having entered the Great Oolite. On May 4th, I heard the brewery pumps had been connected the day before, and were throwing half a barrel a minute. On July 6th, a "Special Pump," placed just over the bore-pipe, was pumping thirty-six gallons per minute, "which is amply sufficient for all purposes." On September 21st, Messrs. Bowley wrote: "On testing the supply, we found

90 barrels an hour; but this is more than we require, so that, practically speaking, the supply appears inexhaustible."

Early this year, Mr. Theodore Watney determined to bore for water at the site of a proposed new brewery, south-east of Deptford Cemetery. I was called in by the contractors. The spot was $1\frac{1}{4}$ miles south-west of the outcrop of the chalk, and $1\frac{1}{2}$ miles from the Kent Waterworks wells. They were advised that the spot was favourable, as they were on the south side of a well-known anticlinal; that, taking 88 feet as the height of the ground, it would be "99 feet, or say 100 feet, to chalk"; that they would probably have to cut a good many flint bands before obtaining a sufficiency. The chalk flints were touched at 99 feet, and the chalk itself at 100 feet, from the surface. The first 70 feet of chalk gave no water. They reached some supply at 250 feet from surface, which gradually increased to 320 feet total depth, when they found the supply from all sources 30 gallons per minute; or nearly as much as at Cirencester. I am of opinion that much of this is sand water (on account of details in the course of boring, and of the ultimate level of the water—stated to be 40 feet below ground). By the kindness of Messrs. Legrand & Sutcliff, I am enabled to append a Table of Supplies to Breweries, showing cost, &c.

The Sevenoaks cutting displays a succession of thin beds of calcareous sandstones—alternating with argillaceous sands—locally known as rag and hassock. Upon the lower greensand just there, there are no streams, but all the rain that falls is absorbed, and passes down by the rag or is evaporated. Water was wanted for two large houses, gardens, and cottages, &c., on the Ashgrove Estate, and I was called in by the architect. Upon examination, I found Hernewood, one of the houses, was near the summit of the L.G.S. escarpment, and that in consequence there was no sufficient

	Date.	Depth of Bore.	Quantity supplied per Day of 10 hours.	Total Cost.	Remarks.
NEW RED MARL & GYPSUM.					
		Feet.	Gallons.	£ s. d.	
NEWARK-ON-TRENT—					
Warwick & Sons	1874	96	60,000	138 10 0	Water from Sandstone. 1,500 gallons per hour at first.
BURTON-ON-TRENT—					
Truman, Hanbury, & Co. . . .	1876	113	40,000	242 0 0	Two bored tubes coupled.
GRAVEL.					
BURTON-ON-TRENT—					
Bass & Co.	1875	27 (Average)	400,000	641 0 0	Twenty-five 3″ wells, average depth 27″.
Thompson & Son	1873	30	30,000	71 0 0	Three 3″ wells, depth 30′.
Burton Brewery Company . .	1874	25	120,000	102 0 0	Eight 3″ wells, 25′ and 22′.
Allsopp & Sons	1869	27	600,000	800 0 0	Thirty 3″ wells, over 27′.
IRELAND—					
Cherry Bros., Waterford . . .	1879	53	27,000	63 0 0	"From the bottom of the bed of the river."
Murphy & Co., Clonmel . . .	1880	25	30,000	50 0 0	Three 2″ wells, each 25″.
CHALK.					
DORSET—					
Neame & Cock, Blandford . .	1879	63	14,000	59 0 0	On river Stour.
SUFFOLK—					
Worthington & Co., Beccles . .	1879	84	10,000	79 0 0	
MIDDLESEX—					
Toynbee & Co., Acton	1880	483	7,000	893 0 0	
KENT—					
Pontifex & Co., Elmer's End . .	1878	180	10,000	226 0 0	To Chalk, 108′ 6″. A Thanet Sand Spring rises 4′ above surface.
COAL MEASURES.					
LEEDS—					
Alfred Wright	1880	109	36,000	102 0 0	

gathering ground to afford the required supply, the whole area of contribution at that point being only 10,000 square yards. Being limited to a single estate, I found that the largest available area was commanded at the northern end, near Ashgrove Farm, and was about a quarter of a square mile. At this point a well existed, but I was unable to ascertain its depth, from the secure manner in which it was covered. Now, if 8 inches be taken as the annual average depth of rain absorbed, this gives a mean daily supply of 79,245 gallons upon a quarter of a square mile. As the breadth of the basin is here half a mile, and the well at Ashgrove Farm is half way across it, the whole of this quantity must flow within a quarter of a mile of it on either side. To gain all this, it would evidently be necessary to drive drifts along this line from the well in question, and even then it must be remembered that the various rag beds form the water channels. The well has been deepened to 125 feet, and found to yield 30 gallons per hour.

In this neighbourhood, the existence of certain synclinals in the strata has gathered the subterranean waters into certain lines. The Sevenoaks Tunnel, which falls all the way towards Tunbridge, cut through one of these close to the northern end, and the stream flows out at the southern end, where it was delivering 14·33 gallons per second, or 20,640 gallons per day—May 29th, 1880.

At the northern end, the Sevenoaks Water Company have sunk a well right on to it, and give the districts therefrom a constant supply of 150,000 gallons per day (according to the Urban Water Supply Return, 3rd July, 1879); this added to the above flow = 170,640 gallons per day.

Unsuccessful Borings.

In November 1878, Messrs. Langton, Brewers, Tontine Street, Folkestone, were boring in search of water. Not

meeting with success, however, I was called in. At the date of my visit, the boring had reached 131 feet 6 inches, having passed—

	Feet.	Inches.
Made ground and Folkestone Sand	15	6
Sandgate Beds - - - -	101	6
Hythe Beds (Sandstone, Sand, and Limestone) - - - -	14	6

There had been no previous boring in Folkestone, and, indeed, the thickness of the Sandgate beds was now first proved. Messrs. Langton were advised that, as they had gone so far, it would be as well to prove the Hythe beds, but that the water would most probably be salt. On November 20th, a small pump drawing 33 feet below ground was applied, and obtained 7 gallons per minute. The water was as salt as brine. The distance from the sea is a quarter of a mile; the height of the ground is 28 feet above mean-tide level, and the water-level stood at high tide at 22 feet 6 inches below the surface, or 5 feet 6 inches above mean-tide level, and at low tide at 29 feet 3 inches below the surface, or 1 feet 3 inches below mean-tide level. The Hythe beds, from which it was hoped to obtain fresh water, do not appear on the French coast, but thin out somewhere in the Channel. On December 9th, they were bottomed at 148 feet, having a thickness of only 31 feet. Then followed light sandy clay to 151 feet, after which clay to 189 feet 9 inches, when there was a thin sandy bed. The contract was completed at 195 feet. This boring proves how very rapidly the lower beds of the Hythe series have thinned out under Folkestone. At Lympne and eastward they are about 60 feet thick, so that there is a loss of 34 feet between those two places.

I have lately visited Burnham Brewery, Somerset, which is half a mile from Stert Reach of the Parret just before it

enters Bridgwater Bay, where Mr. Holt last year bored 177 feet into the lower lias, deriving from the stony bands a large supply of water as salt as brine, and very sulphurous. This is only used for refrigerating. Many years ago a deep boring was put down in the lias at Somerset Court, three miles from the sea, at Burnham, with a like result, as I was informed by Mr. Northcote, the owner. About six years ago, a deep boring was put down at Ham Bridge, near Langport, in the lias, and was carried down 400 feet or more, when the lias, not having been passed through, and no water being found, it was abandoned. In the summer of 1880, Mr. Gordon bored 547 feet in the weald clay at Southwood, near Hildenboro', when the boring was abandoned. The thickness here is far greater than previously supposed. The strata at this point are dipping south, though the general dip of the weald clay hereabouts is to the north, thus indicating the cause—viz., the existence of an east and west synclinal that carries the weald clay down. When the boring reached 394 feet, I was called in by the contractors. Upon piercing the weald clay, the Tunbridge sands would have been entered, a fine water-bearing bed 100 feet thick, upon the outcrop of which the Eden and the Medway flow, at points only 2 miles distant.

The two latter borings cannot properly be classed as failures, but as having been abandoned before the water-bearing stratum sought for had been reached—a very important distinction.

Conclusions.

1. The Public Health Water Act, 1878, assumes the knowledge by Rural Sanitary Authorities and Rural Magistrates of all the details of the subterranean and

other sources of water supply constituting the hydrogeology of their districts.

The Authorities cannot be possessed of this information, as it is only to be gained by proper surveys.*

That, as no Rural Sanitary Authority under the present *régime* can be expected to undertake such surveys on its own behalf, and as all Authorities have equal need of it, the survey of the whole country should be made by Government.

2. That, in the absence of such knowledge, and with the present limited areas of administration, the effect of the operation of the Public Health (Water) Act, 1878, is to drive owners of isolated cottages, or groups of cottages, &c., to adopt the system of tank-storage from the roof, a system which is open to so many objections that it ought not to be made compulsory upon anyone to adopt it.

3. That an increase in the area of administration for water-supply purposes is needed, and that nothing short of Watershed Boards will meet the exigencies of the case.

The President thought that the general feeling seemed to be in favour of postponing the discussion until the next Meeting.

The question of Rural Water Supply was one of great moment. He happened to live in a parish where a large number of small houses were being crowded together on

* A short time after the passing of the Public Health Act, 1875, a Paper was read at this Institution, by Mr. W. H. Michael, Q.C., on "The Working of the Sanitary Acts in Rural Districts." In enumerating the defects of that Act, he observes: "We want much additional information as to the water-bearing strata in the kingdom, and the relative merits and advantages of storage over well supply. The Rural Sanitary Authority may not in its own personality, and without competent advice and assistance, be able to see what works are necessary."

a sandy soil, in the neighbourhood of a junction station, and where the question of water supply was, consequently, becoming an important one. These small houses stood upon plots of ground which contained three things within a very limited area—a house, a well, and a cesspool. This was a state of things likely to work its own solution in some way or another.

The difficulties which hampered local bodies in dealing with questions of this kind were aptly illustrated by his own experience, which he might, perhaps, be excused for citing. For five years past he had served on a Parochial Committee, under the Public Health Act, 1875. For those five years the time and attention of that Committee had been taken up in considering sanitary questions, and they had, over and over again, passed resolutions on the subject. These resolutions were, from time to time, forwarded to the Board of Guardians, where they remained, for all he knew to the contrary. The only result of five years' efforts by the Parochial Committee had been an enquiry from the Local Government Board as to the rateable value of the area included in the special district proposed to be constituted.

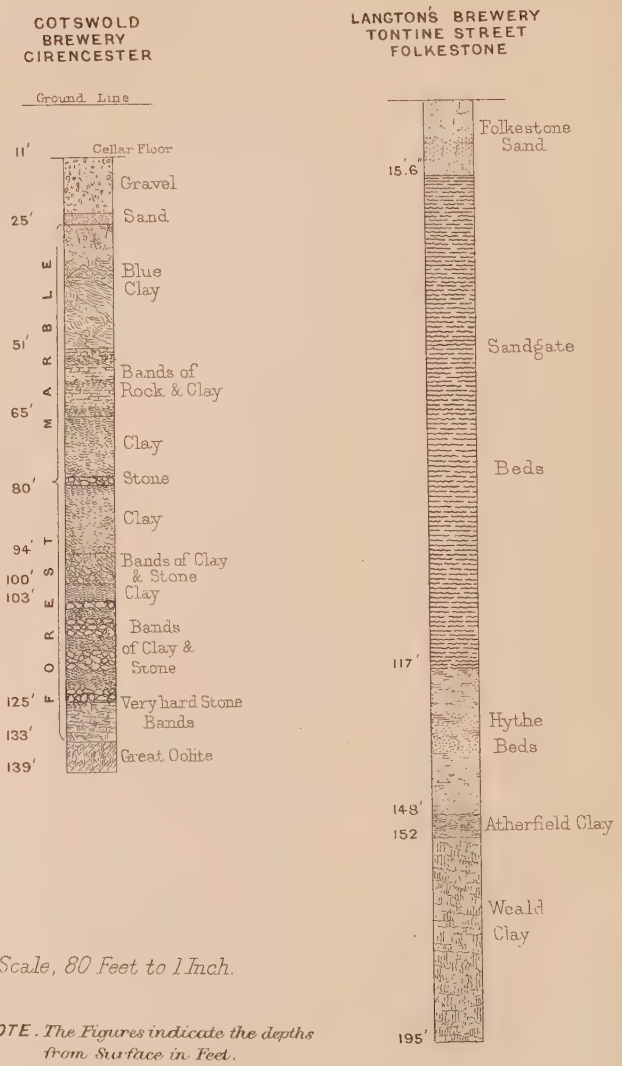
As the next best thing to do, he, and others in his neighbourhood, had endeavoured to get up a water company. The usual Parliamentary notice was given for a Bill, when some gentlemen in London also gave notice of a Bill to supply the district with water. It would not do to saddle the project with the costs of a Parliamentary opposition, and he had, therefore, advised his friends to stand out of the way, which they did, upon condition that the others went on with their application.

Mr. C. G. Grey (Member) proposed a vote of thanks to Mr. Lucas for his interesting Paper. There were one or two points which would, no doubt, be brought out more fully

in the course of the discussion, at the next Meeting—one, barely touched upon by Mr. Lucas, viz., the expenditure of Rural Authorities on water supply; another the great importance of a knowledge of the special geological characteristics of every district dealt with. The completion of the Geological Survey would go far to supply this latter want.

Mr. R. B. Grantham (Associate of Council) had much pleasure in seconding the vote of thanks. The Paper was an important one, and contained matter which could not very well be discussed without previous and careful perusal, and, under these circumstances, he would venture to move the adjournment of the discussion. If Mr. Lucas would furnish some simple vertical sections, to illustrate the main points, the Paper would gain greatly in clearness, and, consequently, in usefulness.

The vote of thanks, and motion for the postponement of the discussion, having been put and carried unanimously, the consideration of the Paper was adjourned till the next Meeting.



C.F. Kell Lith Castle St Holborn E.C

AT

THE ORDINARY GENERAL MEETING,

Held on Monday, February 7th, 1881.

THE PRESIDENT IN THE CHAIR.

The discussion on the Paper, read by Mr. Joseph Lucas (Associate) at the last Meeting, entitled, "Rural Water Supply, with special reference to the objects of the Public Health Act, 1878," was resumed by—

Mr. R. B. Grantham (Associate of Council), who said that some of the statements in the Paper were, to his mind, hardly borne out by practical experience, and the statistics given in the early part of the Paper were those taken in 1871; but it must not be forgotten that a great deal of information had been obtained in the subsequent ten years. No doubt the rural districts were, in many cases, suffering greatly from want of a means of providing a proper water supply, the cost of bringing water from even comparatively short distances to a sparse village population, or a small cluster of houses, being, generally, fatal to projects of the kind.

He understood there had been but few applications to the Local Government Board under the "Water Act of 1878,"—an Act which, if certain practical difficulties could be overcome, would be one of great utility. The author dealt with the provisions of this Act in great detail, and gave some estimates of cost which could hardly be accepted as more than approximate. For instance, the cost

of sinking a well might, in certain circumstances, be accurately put at £13, the figure given by Mr. Lucas; but this obviously depended upon the nature of the ground in which the well was sunk, and might be very much greater for the same depth: it would also depend on the nature of the appliances required for raising and distributing the water. There were, no doubt, cases where, by combined action, scattered houses and cottages, if not too widely separated, could be supplied at 2*d.* per week as the minimum, and 3*d.* per week as the maximum; but he could hardly believe that this was possible except under favourable circumstances, as at Sir Thomas Dyke Acland's villages, on his Devonshire estates, which were on the sandstone. Where it was necessary to sink wells in limestone or any of the hard rocks, it was very doubtful whether water could be supplied at anything like 2*d.* or 3*d.* per week per house, and the only thing to be done was, to collect it in tanks or reservoirs. Tanks, he noticed, did not seem to find much favour in the author's eyes.

A remark of his in a Paper which he read at the Royal Institute of British Architects, as to the supply of water to country mansions, had been quoted by Mr. Lucas. It referred to the common practice of dividing tanks into two parts, so that one part might be cleaned while the other was at work. He regretted that Sir Thomas Dyke Acland was not present to explain how the villages of Doverhay, West Luccombe, and Bossington were supplied at so low a rate. Speaking from practical knowledge, he should not like to undertake to give a supply of water at so small a cost.

He had paid a visit to East Brent Knoll, and observed that an attempt was being made to collect water in tanks, or rather ponds. It appeared that since his visit Archdeacon Denison had considerably extended the scope of his

operations, digging wells and sinking shafts; and he had no doubt that, looking to the geological formation of the hill, a quantity of water sufficient for the neighbourhood would be readily procured from it.

The author had also alluded to the locality of Cirencester, with which he (Mr. Grantham) was well acquainted. The water flowed, in that instance, from the Forest Marble.

He knew a good deal about the well at Cotswold Brewery. He was laying a sewerage system in Cirencester, and had had a great deal of trouble in connection with the well in question.

The 2*d.* or 3*d.* a week per house applied only to chalk or sandy soils where it was not necessary to go very deep, and wells in either of these formations were exposed to the danger of being polluted from surface drainage. In one case he had sunk two wells to a great depth, and pains were taken to prevent the surface water getting into the bottoms of those wells. The wells themselves were 60 feet deep, and the boring at one of them 440 feet.

Dr. B. N. Earle (Visitor) said that, as a medical man, he placed his views with diffidence before the Meeting. He had been acting for the last eight or nine years in an essentially rural district, and had found a number of difficulties in the way of obtaining a supply of pure water, and one of the chiefest of these difficulties was the absence of any powers compelling people to take pure water even if supplied to them. Recent Acts went no further than enabling the Authorities to close contaminated sources of supply. He was sorry to say that in no case had they been able to compel water for one cottage or private individual. In a great number of cases, in the south of Hants—and his district lay on the sands to the south, and also on the high chalk downs—water might be obtained at something like 2*d.* or 3*d.*

a week, and very pure. But in the north of the county a good deal of the land being 200 and 300 feet above the water-bearing strata, it was a more difficult matter to obtain a supply. Things were still in an embryo state, but water had been supplied for two or three hundred people during the last year, and he presumed, at a rate of something like 6*d.* in the £, over the district taxed for it; the purely agricultural district being charged ¼*d.* for every 1*d.* on house property.

The President enquired if that was 6*d.* on the cottage rentals.

Dr. Earle said that was so. It had often been asked what was a "reasonable distance" to fetch water from. The greater number of people under his charge lived a considerable distance apart. There was, probably, about one person to 5 acres, so that the idea of combining was impracticable. The people who suffered most were those on the high down farms with no other person within half-a-mile of them. A scheme had been laid before the Winchester Rural Authority in which it was proposed to take the water from a hill 500 feet high, which would render it possible to extend the supply to a very large area, and even serve the high down farms by bringing the water to the roads near and the neighbouring valleys.

It had not been found possible, in his district, to get the prices quite down to the point mentioned in the Paper.

He had been surprised to find how extensive were the water rights possessed by Companies under Act of Parliament. Passing, a little while since, through a village in South Hants, containing several thousand inhabitants, he ascertained, in the course of conversation, that they were trying to get water, but found they could not do so without paying the Water Company an almost prohibitive price. They

could neither obtain a water supply from the Company without a guarantee, nor could they supply themselves until the Company's powers expired, for which they would have to wait some five years.

The President said until the Company was guaranteed 10 per cent. they could not insist on their supplying them.

Dr. Earle said the annual cost, after payment of the sum to which he had referred, would be £2 a year on a £30 house, or about 1*s.* 4*d.* in the £,—a rather expensive supply.

The water tanks used in the high chalk downs seemed unsatisfactory; there was the trouble of clearing them out; and, added to this, they had great tendency to crack, and let out the water in dry seasons. They always gave in much sooner than the wells. He did not understand whether Table 2 included the expense of raising the water to the surface, the whole machinery, or only the well digging. In the village of Owlesbury, where he suggested the advisability of having waterworks, the average price of water previous to their establishment was 2*d.* a bucket. It took a quarter of an hour's hard labour to raise three buckets, the water being drawn up by means of a wheel, in which men had to walk. He had himself tried walking as hard as he could, and all he managed to get up in 12½ minutes, was 13 gallons. The water so obtained was not nearly sufficient for ordinary domestic purposes, and very commonly in dry seasons, there was no water to be got except from those wells. There were three wells altogether in the place, and he reckoned that each would give 30 or 40 gallons an hour. Sanitary Authorities were very averse to taking action in the matter of supplying water, though they frequently took action by

closing wells. There were great difficulties in the way. The formation of watershed districts, or a combination of such districts, would probably be at once the easiest and most economical way of providing a water supply for rural districts and isolated villages and groups of houses.

Mr. G. J. Symons, F.R.S. (Visitor), said that Mr. Lucas took up the water question just where he (Mr. Symons) left it, so that there was not much common ground between them; but there were one or two points on which he should like to say a word or two. The Paper contained particulars of water supply obtained at very shallow depths, and also at a low cost. He would not go the length of saying that, where they could be safely used, shallow wells were in themselves undesirable from a financial point of view, but they had to be looked after very sharply. From shallow wells came more sanitary tribulation, than from any other source. The village where he lived when a boy at school, in Leicestershire, was on the ridge of a hill, and the consequence was that the wells were very deep. The Leicester Waterworks Company came into the district to take away the water by a large gravitation scheme for the supply of the town,—probably by arrangement with the landowners. Simultaneously with carrying out that scheme, which to a great extent drained the wells, a pipe was brought into the village from springs a little higher up, and stand-pipes which cost a nominal sum were put up near the cottages. No reservoir was constructed, but a pipe was laid, as in the case of the Lancaster Waterworks, into places largely provided with springs; and during the remaining time that he lived in that village, the supply of water to the stand-pipes was ample and sufficient. Considered from an engineering point of view, this scheme might have no great merits, but it cost a mere nothing and answered very well.

The author of the Paper had, he observed, referred (page 150) to some figures contained in a Paper which he (Mr. Symons) had read before the Institution some years ago on the subject of Rainfall. There was a Member of the Institution now present who was present also on that occasion, and might recollect that he (Mr. Symons) was pointing out the different sources whence water supply might be drawn, roofs being one of those sources. He mentioned that the quantity of rain collected on roofs was considerably less than it would be on the surface of the ground. Some discussion occurred, and he explained his own state of knowledge up to the time, and it amounted to this—that in almost every instance where a rain gauge was put on the top of a house it collected much less than a gauge on the surface of the ground. A number of theories were started in order to account for this singular fact; but it was admitted at that time as a pretty nearly universal rule that the fall on the top was less than that on the ground. One did not like to acknowledge an inability to understand a thing of the kind, and many experiments were tried to ascertain the cause of the difference, and how far the phenomenon was general. The final outcome was this—that, taking a tower, say, the size of that meeting room, and placing round it a number of rain gauges, and presuming the prevailing direction of the wind to be from S.W. (which it was pretty constantly in this country), it would be found that the gauge on the S.W. portion of the tower would get very little indeed; but the gauge at the N.E. portion of the tower would get pretty nearly as much as one on the ground, and he believed that if the top of the tower were twice as large as the room in which he was speaking, the N.E. gauge would get as much as one on the ground.

This simply arose from the fact that the tower might be

looked upon as an obstacle to the wind. The wind carried the rain up with it, shot it over the S.W. gauge, and dropped it down on the N.E. corner. His reason for referring to this was, that in the Paper quoted by Mr. Lucas, he deducted, and considered he was bound to deduct, from the main rainfall of any locality, 10 per cent., or 15 per cent., or even more, from the ground rainfall, in order to arrive at the quantity one might expect to collect in reservoirs supplied from roofs. If the roof were sufficiently extensive, present knowledge would show that the decrease would be rather less than the figure he had mentioned. He still maintained that there would not be as much fall on the roof as on the ground, unless the roof were of enormous size. He did not find, on reading the Paper, any reference to the question of dew ponds. There was a capital little pamphlet, of some 50 pages, written some three years ago by Mr. Slade, in which he alluded to dew ponds, or ponds which could be formed in the chalk hills, in the vicinity of the district to which Dr. Earle had referred. It showed what could be done with dew ponds, because the labour of making wells was enormous.

He did not understand why wind was not more used as a motor for raising water. In the fen districts, windmills were extensively employed for driving the pumps, and he did not see why this arrangement should not be tried with these big wells in chalk districts. With some such an arrangement as "Armstrong's Accumulator," it would, he thought, be possible to store up the wind force of windy times to be available in times of calm.

He had been rash enough years ago to say that the Water Supply question had become a scramble between the rich and the powerful and the humbler populations, which had to take their chance. As years had gone on, this opinion of his had gathered strength. One thing much

wanted was, as Mr. Lucas had said a complete survey of the aqueous resources of the country. The present difficulty was how to get rid of water—not to store it. There were cycles of wet seasons and cycles of dry seasons. The country was now suffering from the former, and Parliament was engaged in legislating for the diminution of floods. By and bye would come dry seasons, and with them as much difficulty in getting water as there was now in getting rid of it.

On the whole, there was, he thought, rather too much tendency for legislators to be led away by popular clamour. Very little consideration would convince any one that floods are not the only hydraulic irregularity requiring attention.

Mr. G. H. Leane (Member) said he observed (pages 174 and 175 of the "Transactions") that reference was made to some wells sunk near the sea, and which proved to be salt. It occurred to him that it might be interesting to have on record in the "Transactions" some facts relating to wells sunk in the sea from which very good water had been procured. He had, therefore, asked his friend, Mr. Hill, who had been engaged in the construction of forts at Portsmouth, and which he (Mr. Leane) frequently visited when in that neighbourhood, to give him some details of the works, and he should be very glad, with the permission of the Meeting, to read Mr. Hill's letter, kindly written in reply to his request:—

"BORINGS FOR FRESH WATER.

"I have read the Paper you kindly sent me; it contains much valuable information.

"On the particular point referred to by Mr. Lucas (pages 174 and 175), as to the brackish character of water sometimes proceeding from borings near the sea, I am very pleased to place the little experience that I have, relating to such matters, at your disposal for communication to the Members of your Institution.

"The Sea Forts at Spithead have each of them a fresh-water well, which has been made under considerable difficulties; those of the 'Horse' and 'Norman' Forts, which are the main defences to the entrance of the port, are carried to practically the same depth from high water-mark, or about 570 feet. In both these wells the beds passed through have been of the Bracklesham series, with a little overlying recent deposit, and in each case, the water, which was found in some sand beds as far down as 150 or 200 feet from the surface, was brackish, but beyond these depths a bed or beds of extremely solid greenish sandy clay, some 200 feet thick, were passed through, which were impervious to, and completely shut off, the overlying brackish water.

"At the Spit Fort, which is about 2 miles nearer the mouth of Portsmouth Harbour, the water was found at a depth of 400 feet from high water-mark, after passing through the same beds of solid clay, and the result agrees, in the main, with calculations based upon the depth of wells in Portsmouth and Gosport, and the dip or inclination of the strata, which is pretty nearly from north to south. As you are aware, the Gosport well, which is about a mile from the sea, is something over 300 feet deep; it passes through the same clay into the same sand, and is about 2½ miles to the northward of the Spit Fort.

"There are many brewers' wells in Portsmouth of about the depth, viz., 300 feet, and the whole of these, including those of the Sea Forts, yield a supply of excellent, though very soft, fresh water.

"With regard to the level to which the water rises in these wells, I may inform you that we find those at Spithead to stand at about mid-tide level, but they rise and fall some 3 or 4 feet simultaneously with, or rather following the rise and fall of, the tide and proportionately to its height—that is say, they vary a little more at the spring tides than at the neap tides; approximately, the variation in level is only about one-third of that of the tide. The water of the Gosport well, when left standing, rises to within 30 feet of the surface of the ground, which is also somewhere about the mid-tide level, but it has not been observed to vary with the tide.

"At 'St. Helens' Fort, on the Bembridge point of the Isle of Wight, a well has also been sunk, but to a depth of 170 feet only; the beds passed through and water-bearing stratum being the more modern Bembridge series, but there also, a sufficiency of solid clay to keep back the salt water was found overlying the water-bearing stratum: in this case also the level of the well is coincident with that of the mean tide, and varies somewhat with its rise and fall.

"At Fort 'Monckton,' on the Gosport shore near Haslar, a well is now being sunk, which, at a depth of 170 feet, is still in brackish water; and I have no doubt whatever that the fresh water in this case will have to be sought at a *further* depth of from 170 to 200 feet.

"It is apparent that wells near the sea can only be successful in so far as the geological conditions are favourable to their construction; if there is a good dip of stratum from the shore seaward, and even a comparatively thin but solid bed of clay covering the shore at high water-mark, fresh water would be found at a moderate depth, but I take it, it is a *sine quâ non*, 1st, that there should be a dip of strata from the shore seaward; 2nd, a sufficiently deep and extensive overlying bed of solid clay to shut out the salt water.

"To refer to cases in which borings near the sea will be unsuccessful, one may take, as an extreme illustration, a position where the line or axis of the outcropping strata is at right angles, or at a considerable angle, to the sea shore, and the water-bearing sand beds are thus exposed to the salt water (see P.S.): at such a place, it will either be necessary to go a considerable distance inland to find good water if on a flat coast, or if it be a hilly country, the head of pressure of the descending fresh water may be sufficient to keep back the influx of the salt water at no great distance from the shore. It is, in fact, a simple matter of geological condition combined with hydrostatic pressure, and dependent also upon the greater or less porosity of the sandy water-bearing stratum, and those immediately adjacent to it. In the case of the wells at the Sea Forts or elsewhere, wherever the water rises and falls periodically with the tides, I should suppose that this action is due to the balance of pressure of the head of fresh against the salt water, which somewhere or other mingle, modified by the friction of the beds through which they respectively pass.

"I ought also to say that in all the wells I have referred to in this neighbourhood, both at Portsmouth, Gosport, and the Sea Forts, although the water, when left standing, rises to mid-tide level, there is not sufficient head of pressure to give a supply at this depth, and pumps are inserted to lift the water from depths varying from 70 to 100 feet.

"I trust that you may find my brief statement of some information and service."

"P.S.—Referring to my remarks in this letter, it seems to me, from simply looking at a geological map of England, that Folkestone and the unsuccessful well referred to on page 174 of Mr. Lucas's Paper, must be a striking example of such a situation.

"The salt wells near Bridgwater, whose geological sur-

roundings appear from the map to be principally alluvial, might, I should think, have been previously judged very uncertain in their result, on account of the generally loose and porous character of alluvial beds, so far as I know anything of them.

"In both these cases you will kindly understand that I take merely a superficial view of the matter; I know nothing personally of either place."

He did not think these wells could be classed in the 2*d.* a week category. He feared they would cost the country a great deal more than that, but they were of inestimable value in their particular situation.

On page 169, Mr. Lucas had mentioned water in Egypt obtained by infiltration from the Nile. Such water as was found in its immediate neighbourhood was generally salt or brackish in its nature, owing to the deposit of nitre in the soil—so much so that after a very high Nile this nitre appeared to have been syphoned out by the water which was embanked higher than the surrounding district, and on its subsidence a film of nitre was left in the soil. The late Khedive, when he introduced deep ploughing, entirely spoilt a great deal of the land by disturbing so much of the nitre underneath.

There was a great deal of salt manufactured at Say Island, about 50 miles up the Nile, above Wady Halfa. It had been found by his partner, when surveying in Egypt, that those wells sunk through the Nile deposit into the gravel beneath were free from salt when properly lined (the deposit being about 30 feet thick). In one case he had found a spring of perfectly clear and wholesome water issuing from rocks 30 miles above Cairo. Higher up the Desert most of the wells were salt, although they could not be influenced in the same way as the others. How the salt got there he could not determine.

Mr. C. E. De Rance (Visitor) said that he had read Mr.

Lucas's Paper with interest, because no one could more fully realize the crying want of a Rural Water Supply than a Geological Surveyor, constantly the witness of the want of pure water, and often needing it for himself. The first impression, on reading the Paper, might be that a means had been found to meet that demand; but consideration showed that this was too good to be true. Mr. Lucas had alluded to the Local Government Board allowing £8 13*s.* 4*d.* and £13 for sinking wells for isolated cottages, and stated that this was too much, and that supplies from springs could be obtained at a much smaller cost, giving, as an instance, Sir Thomas Dyke Acland's water supply to his villages. He observed that one of the villages referred to was supplied by a dip-well only, others by stand-pipes, from which water had to be fetched. The £13, referred to in the Paper, was, he (Mr. De Rance) understood, the cost of bringing water supply into a house. The cost of supply to mere dip-wells or stand-pipes would, of course, be much less than in the former case.

The cost of a 50-foot well in Hants was quoted in the Paper as £7 10*s.* In the part of the north of England, where he had been stationed, he was certain that 50 feet could not be dug, and appliances found, at any such price; and he spoke from personal experience.

The author had given Messrs. Legrand & Sutcliffe's schedule of prices for borings. He was aware that, in many places, the cost of making their wells was very low, and that the prices compared favourably with some others he could mention.

In calculating a water-rent, to produce 5 per cent. on prime cost, it was necessary to take into consideration something more than the expense of sinking the wells. There were other things required, such as main pipes for distributing the water, and pumps for lifting it. In some

of the instances mentioned it would even be necessary, he presumed, to provide steam-engines. For instance, the Aldershot Waterworks Company supplied 1,175 houses in the year 1871; and in this case pumping was probably required, with all the resulting expense of engines and plant, coal and management, to be added to the cost of well-sinking, before calculating the water-rate, which was to yield 5 per cent. on the outlay. It would be interesting to learn how it was that the cost of sinking 130 feet at Skegness amounted to so large a sum as £800. Probably, there were special difficulties in the case which accounted for it. Two borings of 130 feet were given in another instance for the supply of a present population of 3,000. He assumed that, in this case also, there would be pumping and also distributing pipes. If this was so the cost per week would be considerably higher than the decimal of a penny given in the Table.

The author stated that tanks compared very unfavourably, as regards cost, with wells and springs; but if to this was added the cost of taking the water to the houses this disparity disappeared.

He agreed with the author as to the necessity of constituting Watershed Boards. The want of such Boards was felt not only in places using surface waters, but even where wells were used; for water drawn from a source pure in itself might become suddenly polluted from some cause unpreventable without complete control of the basin. He agreed with the author that the Local Authority could not be expected to make complete geological and hydraulic surveys of their district, and ought to have access to Government information on the subject. On this head it might be useful to mention what H.M.'s Geological Survey were doing towards giving this information. First of all, there were the maps of the Ordnance Survey, coloured to represent the

various subdivisions of the geological formations, with the boundary lines and faults, and the direction and amount of inclination of the strata. Maps of that character were published on the scale of one inch to the mile, and six inches to the mile; the former was nearly complete for the whole of England and Wales, the latter for the six northern counties.

They were also publishing another edition, showing the actual surface soil of the country. The surface, if formed of chalk, coal measure, or other rock, is shown by its distinctive colour; if the older strata happen to be overlaid by *drift* clay or sand, which sometimes reaches a thickness of 100 feet, or even 300 feet, it is also shown by a distinctive colour. These surface maps were completed for the London basin and the six northern counties, and would, he thought, be of great assistance in the matter of Water Supply. It was all very well to say, "Here we have so many hundred square miles of porous rock, and allowing 6 or 10 inches for percolation annually, according to its character, we shall get 240,000 or 400,000 gallons per square mile a day; but if it was found that the water percolation was cut off by a rock or an impermeable drift clay, the occurrence of the porous rock in that district was rendered nugatory, except for storing water absorbed in a distant outcrop, if any.

These maps were found to be of very great use in tracing the connection of character of soil and disease, and for agricultural purposes. For the latter object a special set of maps had been recently prepared for the Royal Agricultural Commission, of which the Duke of Richmond was the Chairman. Those of the six northern counties and of Cheshire were now complete. The staff was surveying the remainder of England, and he hoped before long they would complete the whole of the country for the superficial soils.

The Geological Survey, in their "Memoirs," also published the details of the wells and borings sunk in the district described; and, lately, he had been adding, in Lancashire and Cheshire, by way of addition to the ordinary Geological Maps, the artesian contours, or heights, to which water will rise on the strata. Some years ago, Monsieur Delesse showed the height to which water would rise over the Paris district and other parts of France, and Mr. Lucas had done useful work in this direction over the London basin. Adding these lines to the maps of the Government Geological Survey increased their value; and Mr. Lucas, so far as he knew, was the first to commence this work in England.

It must be remembered that wells can only be useful in that portion of England and Wales consisting of pervious rocks, which, he found by calculation, was 26,687 square miles. About 21,000 square miles were covered with Silurian, Devonian, and other rocks which were absolutely impermeable. Headings driven in slate beds far into hill-sides were perfectly dry. Mr. Lucas had mentioned that he considered the rocks that were most favourable to subterranean water supply were limestone and calcareous sandstone. He should like to ask the author whether he meant for springs or wells.

Mr. Lucas replied that he meant for wells.

Mr. De Rance said that, in that case, he differed from him absolutely. It seemed to him that for sinking wells, excepting certain chalk-wells, limestone (taking as an example the most important, the carboniferous limestone) was the worst rock possible for the purpose, being perfectly porous, fissured, and jointed, and the water absorbed tended to form underground rivers, which either evaporated as springs or

disappeared to unknown depths. All the towns in England supplied by wells and using large quantities of water derived their supply from sandstone. Birmingham, with four wells, had a yield of nine million gallons a day; Leamington, 750,000 gallons; and Southport, 60,000 gallons from two wells; Liverpool, 6½ million gallons from six wells; Nottingham, 3¾ millions, from Restwood Pumping Station alone. All these were from the New Red Sandstone and Permian formations. Large quantities of water were yielded by Coal Measure Sandstones, which were not calcareous.

In contrast to the supplies derived from sandstone were the examples given by the author of subterranean supply from calcareous rock. He found, firstly, that the yield of the well in the Cotswold district was about 900 barrels a day (about 10 hours, he supposed, representing the working day); and secondly, that of the boring at Mr. Theodore Watney's Brewery, 43,000 gallons only. This was a chalk well, and he was aware that the chalk in some districts yielded a large quantity. Chalk was an exceptional case, and was a limestone of ordinary character, parting with water with great slowness. The oolitic limestones occupied some 66,000 square miles, but they were much cut up by clay beds. These beds were thin, and however few, were very valuable as the source of springs.

He noticed that Mr. Lucas spoke of the large quantity of water in the Seven Oaks cutting. He was aware that the author had gone into this district in some detail, but his colleague, Mr. Topley, had previously made the underground water of this area a subject of careful investigation, and his results were published in the Geological Survey, Wealden Memoir. The author's section of the Tontine Street Brewery was very useful. He put the thickness of the Sandgate Beds (page 174) at 101 feet, which was 20

feet more than was given by Mr. Drew, formerly of the Geological Survey, and within 10 feet of the thickness given by Mr. Hilton Price. He noticed this, because, on referring to page 174, one would apparently gather that the salt water found in the borings at Folkestone was drawn 30 feet from the surface. The author, however, had told him that this was not the case,—that the surface springs were excluded, and that the salt water was pumped from the rock beds found beneath.

In connection with the salt water found at Folkestone, he might refer to some experiments made there by Isaac Roberts, a well-known contractor. Mr. Roberts had been going lately into the question of how much water sandstone would hold, and the quantity of salt that it would filter, and had been running a large quantity of it from the sea through blocks of sandstone. He found that these blocks acted as a natural filter, abstracting all the salt, so to speak, from the water, till they became supersaturated and took up no more. But fresh water passed through the blocks of supersaturated sandstone, took up the salt again, and left the rock in its original condition. This seemed to throw some light on the subject of the Liverpool wells. Some people talked of the wells near the rivers getting salt from the sea and being spoiled, but it appeared that the salt in the Liverpool wells, used for the Corporation's supply, was due to another condition of things. The six wells yielded about 1½ million gallons a day. When one well was pumped beyond its natural capacity the water got harder, but when it was allowed to rest it reverted to its original softness. While the pumping was confined within the natural area the water would be soft, but the more the well was pumped below its natural level the harder the water became, as it was drawing from a district from which all the salts had not been abstracted.

Mr. Lucas, in reply to the discussion, said that the statistics for 1871, mentioned by Mr. Grantham, were those of population only, and that the figures relating to cases from practice and the scientific facts, were of recent date.

The same gentleman's observations about the Cirencester Brewery must, he thought, refer to an old well which yielded a great deal of water, but which was found to be impure, and not suitable for brewing. Messrs. Bowley were therefore obliged to seek some other means, and resorted to boring. The section of this boring was one of the two which he had prepared in compliance with a suggestion made at the last Meeting.*

Surprise was expressed by Dr. Earle at the lowness of certain figures which he had given. He was not answerable for the accuracy of those figures, which were quite as astonishing to him as to any other practical man.

Reference had been made to the large wheels used in Hampshire for raising water, which were turned by some one walking inside them. It was curious to note that wheels of the kind were never met with in Surrey. The most easterly he had seen was at Sheephouse Farm. It must not be supposed that he was an advocate of shallow wells; but it was advisable, in writing a Paper on this subject, to place on record the cost at which such wells could be provided; and a shallow well was not necessarily impure, and, in many cases, would be sufficient to supply cottages.

He quite agreed with what Mr. Symons had said with reference to floods and the storage of water. Public attention was, for the moment, concentrated on the former; but droughts would come in their turn, and the question of floods would be forgotten. Nothing was more to be

* The sections referred to will be found opposite page 179.

deprecated than loose and unguarded utterances on these subjects in the public Press.

The letter which Mr. LEANE had read, relating to a series of borings near the sea, he regarded as a very valuable contribution to the subject. He agreed with the statement that the dip of the rocks would be from the land seaward, under the conditions named in the letter. As regarded Mr. LEANE's remark on the wells fed by the Nile, according to Sir GARDNER WILKINSON, the wells in the alluvial deposit were so-called sweet-water wells, but beyond the alluvial plain they were perfectly salt, and this was true of the whole of the Sahara.

It was incorrectly assumed by Mr. DE RANCE that the sum of £8 13*s.* 4*d.* was intended by the Public Health Act to cover the cost of a supply into the house. As a matter of fact, the £8 13*s.* 4*d.* might all be spent in bringing water to within a "reasonable distance" of the house. Table 3, he might observe, was not a schedule of prices, but a record of the actual cost of the works named in the Table. It was true, as regarded the Aldershot Waterworks, and, perhaps, some other given in the Table, that the column of average water rent to produce 5 per cent. on prime cost related to the cost of the well only; and that, if the pumping machinery, and so on, were taken into consideration, the cost would probably be higher. To the best of his recollection the Skegness wells overflowed; and there was, consequently, no pumping required in that instance.

Ten inches for percolation was, he thought, very much too high. He never attempted to use a higher figure than 8 inches in the most extreme cases, generally adopting 6 inches.

Mr. DE RANCE inquired what rocks Mr. LUCAS referred to?

Mr. Lucas replied that, of course, the nature of the rock would make a difference; at present the information on the subject was very insufficient, but taking any ordinary rock, through which percolation could take place and which was covered with ordinary soil, he did not think it was safe to go above 6 inches.

What he meant by saying that limestone was most favourable for water was this—the water in passing through limestone dissolved part of the rock, and for that reason percolation took place more freely in calcareous sandstone, which was particularly porous, than in sandstone which was not calcareous. This he knew from personal experience on the lower green sand of Surrey, Kent, and other places where the wells gave extremely small supplies and repeatedly disappointed people who sunk them, and more especially people who bored for water. The cases in the new red sandstone, cited by Mr. De Rance, came under the head of large supplies, which was treated on page 169 of his Paper. He had separated these cases from the others, and in his opinion the comparative abundance of their supply was due to some collection of water on the surface.

He had thought when he wrote the Paper that the curious quotation from Andrew Borde, on page 164, was condensed by that writer from the 6th chapter, Book 8, of Vitruvius, but he had since been told that it was copied, word for word, from Hippocrates, who was born B.C. 460.

The President feared that no very practical conclusions had been arrived at. This much seemed to be demonstrated, that water could not be supplied in rural districts for the 2*d.* or 3*d.* per week per house, to which so much reference had been made.

Shallow wells had been deprecated by several speakers. Of course, such wells wanted looking after, but to say that

shallow wells were to be avoided where it was not possible to get deeper ones was not practical.

There was some little mistake in the remarks of Dr. Earle with reference to Water Companies. A Water Company in possession of a district was not bound to supply any house in that district unless guaranteed a rental equivalent to 10 per cent. on the outlay.

This, however, was beside the question under discussion, for farmhouses and cottages in the country could not be connected under a grand system of Water Supply. The cost of doing so would be immense, as had been proved by the experience of those who had brought water to their private houses.

Nothing had yet been done, so far as he could discern, to put the question of Water Supply to small villages on a practical basis.

He was glad to learn that there was some prospect of an early completion of the map showing the surface geology of the country.

The Meeting then adjourned.

ECCLESIASTICAL DILAPIDATIONS.

By G. R. CRICKMAY (Member).

Read at the Ordinary General Meeting of the Institution of Surveyors *February 21st*, 1881.

THE PRESIDENT IN THE CHAIR.

The subject which I have undertaken to bring before this Institution is that special branch of Dilapidations which applies to Ecclesiastical Buildings. I propose—

First.—To point out the difference between Ecclesiastical and Lay Dilapidations.

Secondly.—To consider the law of Ecclesiastical Dilapidations and its operation previous to the passing of the Dilapidations Act, 1871, and to refer to some legal decisions which guide the Surveyor in his survey.

Thirdly.—To consider the Ecclesiastical Dilapidations Act, 1871, and the mode of procedure under the same.

Fourthly.—To suggest some modifications and improvements in the Act, and make a few observations with reference to fixtures and waste.

In laying these comments before you I do not claim any new ideas on the subject, or any special knowledge beyond that possessed by many Surveyors present; but, having been invited to prepare a Paper, I have willingly put a few ideas together, hoping that the discussion of them may elicit a considerable amount of information and bring out many useful suggestions.

First.—Grady, in his excellent work on Dilapidations, defines dilapidations, or waste, to be the act or default of the party having a usufructuary interest in the lands or

tenements of another, by which the property of that other is injured or deteriorated; and as the law which imposes the necessity of guarding against dilapidations is founded on the mere right of user, the nature and extent of the repairs to which different tenants are liable will depend not only on the nature of the tenancy, but also on the thing used. The principle which guides the Surveyor in his survey of Lay Dilapidations is that there is a certain limit to the age of all buildings, and that when this age is attained, or when the building is fairly worn out, the cost of rebuilding falls upon the landlord. It is therefore necessary for the Surveyor to ascertain before making a survey, say, between lessor and lessee, the age and state of the premises at the time the lease was granted, as well as to use his experienced judgment in deciding whether the dilapidations arise from fair wear and tear, from old age and natural decay, from neglect of repairs, or from using the premises for purposes other than those for which they were originally leased. But in the case of Ecclesiastical Dilapidations, the incumbent exercises a purely beneficial ownership over the estate; he has no liabilities in respect of either rent or covenants, and the Common Law rule acts upon the principle that he should endure the burden who derives the advantage, and as no other fund is available for repairs or rebuilding, except the income derived from the benefice, the estate of the incumbent is liable not only for the *repairs* of all the glebe buildings, but for their renewal whenever this becomes necessary.

This being so, and seeing that so heavy a responsibility falls upon the incumbent, whose ecclesiastical income is frequently totally inadequate to meet so great a burden, it is of the utmost importance that the Surveyor should possess a thorough knowledge of the law bearing on this particular subject. He should also have a thorough knowledge of

building construction and of all kinds of building materials; be well versed in the custom and mode of taking this class of dilapidations, and acquainted with the value of work. He should withal use due diligence, in order that the fair share of the cost of repair or renewal should be borne by each succeeding incumbent, and not fall in undue proportion on any. His examination of the premises must be a thorough examination, whether in dirty roofs or in places difficult of access, whatever the difficulty or personal inconvenience, as injury may arise to one of the parties as much by carelessness as by incompetency; but more particularly is it necessary for him to be careful when making a survey in a furnished house.

The Law previous to the Act of 1871.

It has been an obligation on the incumbent, from very ancient date, to maintain the property of his benefice out of the income. A curate who holds merely at the will of him who appointed him is not bound to do any repairs—see the case of *Pawley* v. *Wiseman*. A perpetual curate is, however, bound to repair. An incumbent is bound to keep the residence-house and buildings of his benefice in substantial repair, but is not bound to do ornamental repairs, or keep in repair a thing merely ornamental. The nature of the repairs which an incumbent is bound to do to the houses and buildings attached to his benefice—that is to say, the principle on which Ecclesiastical Dilapidations should be taken—is laid down (sufficiently clearly to enable a properly qualified and skilled Surveyor to make a schedule and prepare a valuation) in the case of *Wise* v. *Metcalf*.

This was an action, in the year 1829, against the executors of a deceased rector, by the successor, for dilapidations of the rectory house, outbuildings, and the chancel, and the

question was for what dilapidations he was liable. The estimate, by verdict of a jury, amounting to £399 18*s.* 6*d.*, subject to the opinion of the Court, was made on the principle—

First.—That the former incumbent ought to have left the rectory house, buildings, and chancel in good and substantial repair, the painting, papering, and whitewashing being in proper and decent condition for the immediate use and occupation of his successor; that such repairs were to be ascertained with reference to the state and character of the buildings, which were to be restored, where necessary, according to their original form, without addition or modern improvement.

Secondly.—That if the rectory house, &c., were to be repaired in the same manner only as buildings ought to be left by an outgoing lay tenant, who is bound by covenant to *leave them in good and sufficient repair*, the expense of such reparation would amount to £310, the painting, papering, and whitewashing not being included.

Thirdly.—That if the former incumbent was only bound to leave the buildings wind and water tight, and in that condition which an outgoing lay tenant, not bound by covenant to do repairs, ought to leave them, the expenses would amount to £75 11*s.* only.

For the plaintiff it was argued that the rector was bound to keep and leave the premises in a state of repair, even as to painting, papering, and whitewashing, befitting a person of his revenue; that the premises ought to be left in the same condition as that in which they ought to be kept; and that it would not suffice for the previous incumbent to keep them merely wind and water tight: if so, it would be sufficient for his successor to keep them in the same state of repair, and the consequence would be that they would never be in any better condition.

For the defendant it was contended that the authorities did not distinguish between dilapidations and waste, and that the modes of proceeding by sequestration, deprivation, and prohibition, all contemplated and were exclusively applicable to cases of wilful misconduct or culpable omission; that the rector was entitled to the fair usufruct of the gradually consuming property, and the 17 Geo. III., c. 53, was cited, by which the incumbent of a benefice where there is no house, or the house is so ruinous that one year's produce of the living will not suffice to put it in repair, may, after having an estimate prepared, with the consent of the ordinary, raise money to rebuild, by mortgage of the glebe tithes, &c.

Judgment was delivered by Mr. Justice Bayley, who said: "We are not prepared to say that any of the rules "suggested are precisely correct, though the second approaches "most nearly to that which we consider as the proper rule.

"From this statement of the Common Law (which he "had just made) two propositions may be deduced:—

"First.—That the incumbent is bound not only to repair "the buildings belonging to his benefice, but also to restore "and rebuild them if necessary.

"Secondly.—That he is bound only to repair and sustain, "and to rebuild, *when* necessary. Both these rules are very "reasonable, the first, because the revenues of the benefice "are given as a provision not for a clergyman only, but also "for a suitable residence for that clergyman and for the "maintenance of the chancel; and if, by natural decay, "which, notwithstanding continual repair, must at last "happen, the buildings perish, these revenues form the only "fund out of which the means of replacing them can arise.

"The second rule is equally consistent with reason, in "requiring that which is useful only, not that which is matter of ornament and luxury.

"It follows from the first of these propositions that the

" *third* mode of computation proposed in the case cannot be " the right one, because a tenant not bound by covenant to " do repairs is not bound to rebuild or replace ; the landlord " is the person who, when the subject of occupation perishes, " is to provide a new one, if he think fit. And, if the second " proposition be right, a part of the charges contained in the " first mode of computation must be disallowed, for papering, " whitewashing, and such part of the painting as is not " required to preserve wood from decay by exposure to the " external air, are rather matters of ornament and luxury " than utility and necessity."

After other observations, his Lordship concluded thus: " Upon the whole, we are of opinion the incumbent was " bound to maintain the parsonage (which we must assume " upon this case to have been suitable in point of size and in " other respects to the benefice), and also the chancel, and " keep them in good and substantial repair, restoring and " rebuilding when necessary, according to the original form, " without addition or modern improvement; and that he was " not bound to supply or maintain anything in the nature of " ornament, to which painting (unless necessary to preserve " exposed timbers from decay) and whitewashing and papering " belong; and the damages in this case should be estimated " upon that footing. It will be found that this rule will " correspond nearly with the second mode of computation, " and probably will be the same if matters of ornament " and luxury are not taken into consideration."

The case was referred to the Master, to ascertain the amount, and he directed judgment to be entered for £369 18*s.* 6*d.*, an amount between the first and second estimates.

I have referred at length to this case, because it settles the principle upon which these dilapidations should be and are now taken, and it has, so far as I am aware, never been upset.

In the case of *Huntley* v. *Russell* it was held that cottages or farm buildings placed upon the soil of a rectory, but not fixed into the ground and intended at the time of erection to be removed at will, may be removed without incurring liability for waste or dilapidations, although posts on which it stands have, by the weight of the building, become embedded in the ground to the depth of a foot; and in the same case it was held that the executors of a rector are not liable for waste, for having pulled down a building on the rectory and substituted another in a different part, unless the value of the estate is thereby diminished, the burdens upon it increased, or the evidence of title impaired. He is not liable, therefore, where he has suffered the farm buildings to decay, and erected better ones for the same purpose a mile from the house, but in a more convenient situation for the farming business, although no faculty or license has been obtained for the alteration.

It is, however, a very risky proceeding to take down any portion of the buildings without the bishop's consent. I had a case where a barn had been taken down about thirty years before, without consent, and in taking dilapidations I felt compelled to make a claim in respect of it, and the claim was allowed by the bishop. The bishop's consent is now cheaply and easily obtained under Sect. 71 of the Ecclesiastical Dilapidations Act, 1871, although the wording of the section is not quite clear as to the removal of other buildings than the house of residence.

Under the system prevailing previous to 1871 it often happened that persons were employed to act as Surveyors who were practically unacquainted with both building construction and dilapidation law. The clergy themselves sometimes set dilapidations against fixtures, and even when the survey was made by qualified Surveyors the amount of valuation merely was given, with no schedule of particulars,

so that the incumbent had no idea of what repairs he should execute; consequently, he frequently papered and painted and executed the decorative repairs, leaving dilapidations to increase on the fabric of the building; hence the necessity for

THE ECCLESIASTICAL DILAPIDATIONS ACT, 1871,

which was passed for the better sustentation of houses of residence, chancels, and other buildings, which incumbents of ecclesiastical benefices and other ecclesiastical persons are by law or custom bound to maintain in repair, as also for the relief of such persons and their representatives.

This law enacts that a debt of dilapidation money shall be a simple debt, neither postponed after other debts nor preferred before them; otherwise, the Act neither repealed nor altered the provisions of any existing Act of Parliament, nor altered any part of the common law or custom as to the right of the Church or of individuals in regard to the nature of dilapidations, or the nature of the claims to be made and maintained. The alteration made by the Act of 1871 is confined to providing new officers, to limiting and directing the administration of the old officials, to ascertaining when dilapidations exist as defined by the old law, what is the extent of them, and what sum of money they represent. The Surveyor appointed for the diocese or archdeaconry has now a public duty to perform, viz., to the best of his ability to act as an umpire in making an unbiassed decision between the outgoing and incoming incumbent; and in doing so he has to furnish not only to the bishop, but to each party, a detailed copy of the particulars of works (if any should be required) which, in his opinion, should be executed. If either of the parties object to any item or feel themselves injured, they have a right of appeal, but so rarely has this right been exercised that, of 144

surveys made in my own archdeaconry since the passing of the Act, there has been only one appeal, upon which the bishop consulted Mr. Ewan Christian, the Architect to the Ecclesiastical Commissioners, who is probably the first authority of the day on this subject, and whose valuation came out to within a few shillings of my own in a sum amounting to £397, thus practically upholding it. Section 4 defines the buildings belonging to a benefice as including all houses of residence, chancels, walls, fences, and other buildings and things as the incumbent of the benefice is by law or custom bound to maintain in repair.

As before stated, the law of dilapidations is by no means altered by this Act. The alteration consists in the mode of procedure, the various times when a survey may be made, and the relief given to the incumbent who puts his buildings in repair; also in the fact that the actual works mentioned in the Surveyor's report must be executed unless the incumbent obtain the bishop's consent to a particular and specified variation therefrom. Thus, Sections 8, 9, 10, and 11 provide for the appointment of Surveyors and other stipulations respecting them; Section 66 provides for the death or change of Surveyor; Section 67 gives him and his workmen authority to enter and inspect and to execute works; and Section 68 limits the time for taking proceedings against any Surveyor or other person acting under the authority of this Act.

Section 12.—Provides for the inspection of buildings of a benefice at other times than when vacant, either by request of the incumbent or by complaint of the archdeacon, rural dean, or the patron, that the buildings are in a state of dilapidations; and by this section the Surveyor may be directed to inspect the whole or any part of the buildings of a benefice.

Section 13.—Provides for the inspection of buildings under sequestration.

Sections 14 and 15.—Direct the Surveyor, within one month after inspection, to report to the bishop, and send a copy to the incumbent or sequestrator, such report to state *where*, in his opinion, any works are needed.

First.—What works are needed, specifying the same in detail.

Second.—What he estimates to be the probable cost of such works.

Third.—At, or within, what time or times such works, respectively, ought to be executed.

Section 17.—Provides that the incumbent may borrow of the governors of Queen Anne's Bounty, with the consent of the bishop and patron.

First.—The whole or any part of the sum stated in the final report as the cost of the works.

Second.—Such sum as the governors shall think fit in respect of costs and expenses.

This section has been practically set aside because of the objection of the bishops and governors to encumber the benefice with a charge which, legally, should be borne by the incumbent.

Section 19.—Provides for the execution of the repairs by the incumbent in the manner and within the times prescribed.

Section 20.—Provides that, in the case of a benefice under sequestration, the sum stated in the report is to be a first charge upon the moneys received by the sequestrator as net profits, in priority to all other charges except the stipends of the curate or curates, such balance to be paid to the governors.

Section 21.—Provides for the application of money paid by sequestrators to the governors, as to the time that the repairs shall be executed, and as to vacancies occurring during the execution of the repairs.

Section 22.—Provides that, where complaint has been made by the archdeacon, rural dean, or patron, the incumbent may, within twenty-one days after notice, elect to put his building in proper repair, and shall have reasonable time allowed for so doing; but, during their progress or afterwards, the bishop may direct the Surveyor to inspect, and, if the repairs are insufficient, the powers of the Act shall or may be put in force.

Section 24.—Provides that, if a vacancy shall occur before the completion of the works, the report shall not be affected further than by any modification rendered necessary in consequence of the new report caused by the vacancy.

Section 25.—Refers to the houses of residence of archbishops, bishops, deans, and canons who, although liable to their successors for dilapidations, and equally under the principle laid down in the case of *Wise* v. *Metcalf*, are not necessarily brought within the scope of this Act; but Section 25 provides that, if either of the before-mentioned dignitaries wishes to obtain protection for claims for dilapidations for a period of five years, he may call in a Surveyor, approved for the purpose by the Ecclesiastical Commissioners, the certificate of the Surveyor, that the works mentioned in his report have been executed, to be filed in the registry of the diocese, and another copy to be delivered to the archbishop or bishop; when, in case of a vacancy occurring within five years, no claim for dilapidations, except for wilful waste and loss, or damage by fire, shall stand good.

Sections 29 to 43, inclusive.—Deal with vacant benefices.

Section 29.—Provides that within three months after the avoidance of the benefice, unless the late incumbent is free from liability as provided in Section 47, the bishop shall direct the Surveyor, who shall inspect the buildings and report to the bishop; and the late incumbent or his representatives, with his or their Surveyor, have a right of

entry until such time as the question of dilapidations has been finally settled.

Section 30.—Directs that copies of report be sent to the new incumbent as soon as he has been instituted or admitted, to the late incumbent or his representatives; and Section 31 stipulates as to the contents of the report, which must specify in detail the works required to be done.

Sections 32 and 33.—Provide as to the mode of appeal, if either the new or the late incumbent wish to appeal from the report of the Surveyor.

Sections 34 and 35.—Provide that, in due course, the bishop shall make an order stating the repairs and their cost.

Section 36.—Enacts that the amount named in the order shall be a debt due from the late to the new incumbent; and

Section 37.—That this sum the new incumbent is forthwith to pay to the governors; but this is modified by Section 40 to within six months, or by Section 41 the bishop may extend the time to twelve months, and by Section 43, if the money be not paid by the incumbent to the governors within the time named, the bishop is empowered to raise the amount thereof by sequestration.

Section 38.—Enables the governors, *if they think fit*, at the request of the incumbent, and with consent of the bishop and patron, to lend the whole or any part of the cost of repairs which may not have been received from the late incumbent.

Section 42.—Orders that the repairs shall be executed within eighteen months after the date of bishop's order, unless postponed by bishop's consent, with the intention of rebuilding; the execution of the works may also be postponed, as provided by Section 52.

Sections 44 to 53, inclusive.—Provide for the execution of the works.

Section 44.—Provides as to payment of the money standing to the credit of the dilapidation account on the certificate of the Diocesan Surveyor, countersigned by the bishop, and stipulates that if further money be required for the completion of the repairs it shall be paid by the incumbent.

Section 45.—Provides that in cases of sequestration, or of the refusal or neglect of the incumbent, the works shall be executed under the direction of the Surveyor, and paid for as provided in Section 44.

Section 46.—Provides that, if the works are completed to the satisfaction of the Surveyor, he shall certify to that effect to the incumbent or sequestrator, to the registrar, and to the governors; and by Section 47 the incumbent, or succeeding incumbents, are free from all claims for dilapidations as to the buildings belonging to the benefice and specified in the last-mentioned certificate for a period of five years from the date of filing the final certificate, except for wilful waste or neglect to insure against loss by fire in at least three-fifths the value of the house and buildings.

Section 49.—Provides that, a benefice becoming vacant during repairs, the outgoing incumbent is liable for the payment of all moneys in respect of such repairs not previously paid by him to the governors in respect thereof, which moneys shall be a debt due from such incumbent or his representatives to the next incumbent; and such next incumbent, whether he shall recover the same or not, shall be liable to pay all such moneys in the same manner as his predecessor would have been, except that the next incumbent may, with the consent of the patron and bishop, borrow from the governors such sum as he shall fail to recover.

Section 50.—Gives the incumbent power, by consent of the bishop and patron, to alter or remodel the buildings or to rebuild instead of carrying out the whole of the works mentioned in the Surveyor's report or the bishop's order;

and, upon the same being completed, the incumbent is entitled to a protecting certificate, which has the same effect as a certificate of completion given under Section 46; but

Section 51, if such additional or substituted works do not render the whole of the repairs mentioned in the bishop's order impracticable or unnecessary, provides that a proper proportion of the dilapidation money, as estimated by the Surveyor, shall be retained in the Bounty Office, and that this shall be dealt with as regards certificates, and otherwise, in the same manner as if the repairs, not so rendered impracticable or unnecessary, had been the only repairs specified in the order, so that every work, specified in the Surveyor's report, must be carried out, unless set aside by the consent of the bishop, or rendered impracticable by alterations approved by him.

Section 52.—Under this Section if an incumbent wishes to defer the works mentioned in the report, or any part of them, for a limited period, he may do so, on the certificate of the Surveyor, by consent of the bishop and patron, with the proviso that he must first pay to the governors the amount specified in the report, and, in addition, such a sum annually or in gross as may be proper to meet any probable further dilapidations.

Section 53.—Enacts that no sum shall be recoverable for dilapidations, unless the claim be founded on an order made under the provisions of this Act.

Sections 54 to 57.—Provide for the insurance of the buildings belonging to the benefice against loss by fire, and the mode of procedure in case any of the buildings are damaged or destroyed by fire; and if any building so destroyed or damaged is not insured against loss or damage by fire, either at all or insufficiently, the incumbent shall pay the whole sum, or such additional sum as may be required to reinstate.

Sections 58 and 59.—Provide that the incumbent shall be exempt from any claim for dilapidations on any building let on lease, except in cases where the lessee is not made liable to insure, rebuild, or repair.

Section 70.—Provides that if, prior to the passing of this Act, an incumbent should (without due authority) have caused any buildings belonging to such benefice to be pulled down, and shall have substituted *other buildings of equal or greater value*, such incumbent shall (if the bishop consent) not be liable to dilapidations in respect of the buildings so pulled down, provided such substituted buildings shall have been insured pursuant to this Act; and no incumbent shall be liable for dilapidations in respect of buildings pulled down by a previous incumbent, unless the incumbent so holding the benefice shall have received or shall be entitled to recover from the last preceding incumbent the amount chargeable on account of such dilapidations; and in such case the liability of the existing incumbent shall be limited to the amount so received or recoverable.

Section 71.—Gives power to the bishop, on the application of the incumbent and with consent of the patron, to authorize the removal of any unnecessary part of any building belonging to or forming part of any house of residence.

Section 73.—Provides that the powers and authorities contained in the following Acts shall be exercisable, either separately or concurrently, with the powers of this Act, viz., 17 Geo. III., c. 53; 21 Geo. III., c. 66; 7 Geo. IV., c. 66; 1 & 2 Vict., c. 23; 28 & 29 Vict., c. 69.

Immediately after the passing of this Act, Surveyors were appointed for each diocese, and in due course the Ecclesiastical Surveyors' Association was founded, the object being to promote uniformity of practice in carrying out the Act. The Committee and Members meet frequently, and

devote much time and thought to the discussion of any difficult points which may arise in the course of practice, and on which questions may be asked and an opinion sought by Members of the Association. By this means the Act has, on the whole, been made to work smoothly and with tolerable uniformity, and, on a large number of practical questions submitted, the opinion of the Surveyors present has been ascertained and, where necessary, re-discussed at subsequent Meetings, and when a decision has been arrived at it has been communicated to every Member.

The Committee also invited the whole of the Diocesan Surveyors to send copies of two of their reports and specifications, for consideration by a Sub-Committee, who, after many meetings and a large amount of labour, compiled a draft model report and specification, which, after further discussion by the Committee and Members, was adopted as a standard.

Where all have done their part so well, it is rather invidious to mention particular names; but I should fail in my duty if I omitted to mention the assiduous attention of Mr. Joseph Clarke, the President; Mr. Gordon Hills, the Vice-President; and the indefatigable Secretary, Mr. Lacy Ridge; all of whom, with other Members of the Council, have devoted themselves to the task and brought a large amount of experience to bear on the various subjects laid before them. As an example of some of the work done, the Committee and Members of the Association have laid down, for the guidance of their Members: *In reference to Chancels.*—That it is the practice of Surveyors to regard the chancel arch, and the wall in which it is situated, as belonging to the nave of the church, but the north and south walls belong to the chancel, even though arches, opening into aisles or chantries, may have been made therein.

As to Paint and Colour.—External colour in distemper is not a subject for dilapidations, but external paint on brick or stucco and the paint on the inside of sashes are subjects for dilapidations, and, where the work had been previously grained and varnished, plain paint only can be claimed.

Damp.—A question was asked whether if, from the original bad construction, damp comes through a wall and damages skirtings, window linings, &c., an incumbent can be called on to rebuild the wall with cavity or to cover it with cement?

Or, Case 2.—Owing to the roof tiles being porous, the timbers have become decayed, the tiles remaining as good as ever, can new tiles be demanded?

Case 3.—There being no means of keeping out the damp, the woodwork in a basement has decayed. Can the erection of a dry area be demanded?

A reply was given that nothing can be claimed beyond the reinstatement of the decay which has occurred.

Roads and Sweeping Flues.—It was also decided that it is not usual to assess dilapidations on roads, or to charge outgoing incumbents for the sweeping of flues.

Also, where buildings are erected in a manner manifestly temporary, even although the posts supporting the roof enter the ground, it is customary not to assess dilapidations upon them.

The sagging of a floor, arising from the original use of timbers of insufficient strength, is not to be regarded as a dilapidation, provided the materials and construction remain sound.

A building, such as a barn or stable, erected on the glebe by the tenant, and claimed by him, should not be considered as belonging to the benefice.

Fixtures.

No Paper on Ecclesiastical Dilapidations would be complete, unless some consideration were given to the subject of fixtures, which consist of those things in a building which belong or may belong to an incumbent personally, and not to the benefice. The ownership of fixtures affects the question of dilapidations, as, in case they go with the premises, they are subject to claim for dilapidations.

In the year 1857, the Governors of Queen Anne's Bounty required that the specification submitted to them should include cisterns, pumps, pipes, and everything necessary for supplying the house with water; also stoves, grates, 20-gallon copper, sink, kitchen dresser, fittings in pantry and wine cellar, but not other articles accounted tenant's fixtures. Since that date bells have been added to the list. It is, therefore, necessary where money has been borrowed from the Governors, or a grant made by the Commissioners, to examine the specifications deposited in the diocesan registry, as all things described in such specification belong to the benefice, the grant or loan being based on the condition that all works named in the specification are duly executed.

The rules of the Ecclesiastical Commissioners and the Lands Improvement Commissioners are similar to the present rules of the Bounty Office.

In cases in which buildings have been erected in modern times by patrons or by public subscription, it is necessary for the outgoing incumbent, claiming to be paid for them, to show that they were actually supplied by him. An incumbent erecting a house, or making additions at his own expense, is entitled to claim the fixtures therein.

Generally, it may be considered, that if the articles can be removed without waste, they may be treated as tenant's fixtures; if otherwise, they become part of the freehold, and

as such, when dilapidated, are subject to compensation for such dilapidations.

An important recent decision, upon the question of fixtures, was given, in the case of *Martin* v. *Roe*, in the Court of Queen's Bench, January 24th, 1857.

The incumbent of Melbury Osmond erected, in the rectory garden, two large hot-houses which were quite detached from the parsonage house. After his death his executors removed the wood frame and glass work from the mortar in which it was embedded on a low brick wall, doing no damage except that necessarily done to the mortar in the removal.

The succeeding incumbent took the same out of their possession, and claimed it as belonging to him as rector.

In an action, brought by the executors against the incumbent, it was held that the property in the materials so removed was in the plaintiffs; also, that the deceased incumbent, in his lifetime and his executors afterwards, might have removed the whole structure.

It is advisable that, in the case of vacant benefices treated under the Act, provision should be made for referring the question of fixtures to the Diocesan Surveyor, and in the event of his finding that they belong to the late incumbent, that he should value the same, and the new incumbent be empowered to borrow the amount of such valuation from the governors, and purchase the fixtures; and thenceforth those and all future fixtures should belong to the benefice, and of course would become subjects on which to take dilapidations.

Waste.

There are also questions of waste for which an incumbent is liable to his successor, but which do not come strictly within the scope of dilapidations. These are—cutting timber, grubbing underwood, digging gravel, quarry-

ing stone, or mining. Damages cannot, however, be recovered for mismanagement of the glebe land; but the widow of a rector who was ploughing a glebe meadow and committing other acts of waste during a vacancy was restrained at the suit of the patroness.

There is also another kind of waste which has received much consideration from the Committee and Members of the Association—viz., waste caused by the action of water, land washed away on a river bank or sea-board.

The Committee concluded, "That where no artificial structure existed as a defence against the waters, and where neither law nor local custom necessitated any action on the part of the landowners, an incumbent would incur no liability under the Ecclesiastical Dilapidation Act, 1871, for conforming to the ways of his neighbours, and regarding the force of Nature as irresistible;" and next, "That where artificial structures or buildings do exist or have existed, he must be called upon to reinstate them."

The latter proposition appears, however, to be attended by two difficulties.

First. Works, such as sea or river walls, have been erected which have failed, and were, from the nature of things, destined *ab initio* to fail in their purpose. Man has tried—it may be, tried his best—and Nature has beaten him. The Committee are of opinion that incumbents should not be required to continue a useless struggle for all time.

And secondly. Buildings which might have been repaired if taken in time become so damaged, and the whole face of things becomes so changed, that the reinstatement is no longer possible.

In such cases the Committee consider it justifiable for the Surveyor to report that works similar in kind to those destroyed, but on another site, should be substituted for those no longer possible. Compensation would be claimable

only in cases where there has been neglect to maintain defences in themselves of an efficient character.

Progressive Decay.

This Paper has already become lengthy; still, I should like to refer to the question of progressive decay, as it is a question frequently coming before the Surveyor. As an illustration, I may point to a boarded floor partially decayed, not sufficiently to warrant its condemnation and renewal, but too much decayed to place the responsibility on the new incumbent. Under the system prevailing previous to 1871, the Surveyors would agree to give one-fourth, one-third, or even one-half the cost of a new floor; but, now that the works specially mentioned have to be executed, the floor must either be removed or the new incumbent must take the responsibility of the partially-decayed floor.

If an account were opened with the governors to meet progressive decay and renewals, and the Surveyor were required to state what sum the late incumbent or his representatives should pay under this head, it would, in my opinion, be more equitable than the present system.

Appointment of a Board of Assessors.

It has also occurred to me that a committee of five assessors should be appointed in each diocese—three to be annually appointed by the bishop, and two by the beneficed clergy; their duties being—

1st. To examine the drawings of proposed alterations and additions to glebe buildings, and thus prevent the erection of insufficient buildings, which, from being slightly built, become a permanent tax on the incumbent and are a continual source of dilapidations, and to consider and advise whether the alterations and additions proposed are for the benefit of the benefice, even though the incumbent may

be willing to defray the cost, as it sometimes happens that the house, stable, or outbuildings are so large or are so slightly built as to entail a permanent burden on the living.

2nd. To consider the desirability of expending the dilapidation money on the repairs of the buildings, or to renew or partly to renew instead. In all cases where it is proposed to borrow money on the security of the benefice, the facts should be gone into by the assessors, and reported on to the bishop.

In cases where alterations are made or new buildings erected without the approval of the assessors and the consent of the bishop, it should be considered a dilapidation. It would, in my opinion, be desirable to enact that in sequestrated cases the governors may advance the money required for repairs, in order that the whole of the works may be executed at once, without waiting for the money derived from the income of the benefice, which occasionally spreads the work over a long period and makes it more costly.

Also that, where the buildings are 60 years old and upwards, and have been fairly kept in repair, the governors should advance the money for such portions of the work as in lay cases would be paid by the landlord, and that the repayment of this money should be spread over a considerable term; and, if the incumbent is relieved from renewals, he should have the same responsibility as a lessee as to internal paint and paper.

It is also desirable that some mode should be devised whereby the governors may be enabled to advance money in the case of poor benefices, and, if possible, without interest.

In reference to Section 47 giving protection for five years from the date of filing certificate at the Registry, which is a premium for dilatoriness in the execution of the work, if made five years from the date of the bishop's order, it would very much facilitate the completion of works, and

it would be more just if this section were entirely repealed, and a survey made compulsory whenever a vacancy occurs.

Insurance Fund.

A great many schemes have been discussed for forming an insurance fund in lieu of dilapidations. I once hoped to see such a scheme carried out; but, although at first sight feasible, there are so many difficulties in the way that it appears an almost impossible task.

Terriers.

The question of terriers is an important one. The Surveyor rarely—I may say never—finds one; and he has often considerable difficulty in finding all the buildings and glebe belonging to the benefice. His duty should be to prepare a correct terrier of all the possessions. It frequently happens that some of the glebe is situated in other parishes, and this he often discovers by the merest chance. It has been suggested by Mr. Rowe that terriers may be provided by the churchwardens and handed to the registrar at each triennial visitation, corrected and signed at a parish meeting previous to the visitation. No doubt property has been lost to the Church for want of some such arrangement.

The subject is so large and various that many other points may be inserted in this Paper, and suggestions made for small but important amendments in the Act. This would, however, make the Paper far too lengthy, and no doubt many of them will be brought out in the discussion which will follow.

In preparing this Paper I am indebted to Gibbon's "Law of Dilapidations"; Grady on "Fixtures and Dilapidations"; "The Report of the Committee of the Lower House of Convocation"; Bruton on "The Ecclesiastical Dilapidations Act, 1871"; and "The Proceedings and Reports of the

Committee and Members of the Ecclesiastical Surveyors' Association."

Mr. T. M. Rickman (Member) had great pleasure in proposing a vote of thanks to Mr. Crickmay for his excellent Paper. He was acquainted with many of the Diocesan Surveyors, and had often been struck with the great difficulties they had to contend with in carrying out their onerous duties in so many different localities, and amid so many varieties and peculiarities of construction. So far as he could judge, they had done their duty as arbitrators with marked impartiality, and with great success. It was no small test of their ability to be called upon, as they were, to fix a definite sum for the cost of the work included in their estimate, and see that it was not exceeded. They required for the purpose a very exact knowledge of the cost of work throughout a great extent of country, and in places, for the most part, many miles from any town. This, it would be admitted, required a very high degree of practical knowledge. Those who had to do with dilapidations were aware that there was seldom a case without some feature or another outside individual experience, and it was a great advantage to have these knotty points grouped together and discussed, so as to present a complete view of the law and the custom with reference to dilapidations.

Mr. C. J. Mann (Member) had great pleasure in seconding the vote of thanks. He thought that Mr. Crickmay's Paper would be of great value to the Institution, and that the way in which he had summarized the Act, and all that related to it, would be exceedingly useful.

With regard to progressive decay, he did not think there was much hardship in renewing the whole of the floor in the case mentioned by Mr. Crickmay, because, where there was progressive decay at the commencement of a

tenancy, it would not be too much to ask that a new floor should be put down towards the close of it.

As to building a dry area instead of renewing the timbers in the basement, he understood Mr. Crickmay to say it had been decided, in the case cited, by the gentlemen who considered the subject, that all that could be claimed was the reinstating of the timbers. He supposed that, in this case, Ecclesiastical Dilapidations did not differ much from other dilapidations. Decay of the kind might, he thought, be arrested a good deal by proper ventilation. The floors of houses were frequently built close to the ground, and there was no opportunity of providing for the circulation of air beneath them.

Mr. F. Chancellor (Member) said that the facts had been so thrashed out by Mr. Crickmay that there was very little left to say. There were one or two points, however, to which he might briefly refer. The last speaker had alluded to progressive decay. He had always considered that one of the great points of the Ecclesiastical Dilapidations Act was that the Surveyor had to define exactly what had to be done, and the late incumbent or his executors had to pay for that, and nothing more. It always seemed to him that (under the old system) to pay, as Mr. Crickmay had said, for half a floor, meant putting a sum of money into the new incumbent's hands, with which he could not deal immediately. He had always considered this to be unsound in principle.

He quite agreed with Mr. Crickmay's remarks with reference to terriers. The want of proper terriers occasioned Diocesan Surveyors great loss of time in carrying out their work. Within the last two months he had spent one whole day in finding out the property of one benefice. There was no record in the parish of the property belonging to it; and he was compelled at last to go to the

Ecclesiastical Commissioners and others, to ascertain the facts. In another case, so lately as last week, he found, on referring to the tithe map, that every field had been exchanged, and there was no record whatever of the exchange, and no one in the parish who could tell him which fields were glebe and which were not. The consequence was that he would have to get the information the best way he could, and go down a second time. They were better off in this respect in Suffolk than in some other counties. Before the passing of the Dilapidations Act, he almost invariably found, when he had any ecclesiastical survey in Suffolk, a terrier of something like modern date; but in the case of the benefice he visited last week the latest terrier he could find was dated 1627, and was, therefore, of little use to him.

The establishment of an Association of Diocesan Surveyors had been of great utility. The aim and, he believed, the result would be to promote uniformity of practice throughout the country. This was most important, for an incumbent resigning his benefice in Essex, and going, say, to Yorkshire, would be treated on precisely the same principle in both counties. He had great pleasure in bearing his testimony to the value of the Paper.

Mr. Gordon Hills (Visitor) said that he very cordially agreed in the expression of approval of the Paper. The author had evidently bestowed great pains and care upon it, and he thought that most of his brethren of the Diocesan Association would say, when they were able to peruse the Paper, that they agreed with nearly all his statements and conclusions on the subject.

There were some few points, however, on which he would venture to differ from Mr. Crickmay. First, the one to which Mr. Chancellor and Mr. Mann had already referred, viz., progressive waste. He knew it was an old

hobby of Mr. Crickmay's that there should be some estimate made of dilapidations which had not yet advanced so far towards actual decay that they could be called dilapidations, and which were in that state that they did not call for repair. He had been dealing with dilapidations, he was sorry to say, for almost more years than he liked to mention, and from very early days he found that it was not possible, with any degree of prudence, to recognize that kind of decay. Any success he had ever had in dealing with dilapidations—in supporting claims which he thought ought to be advanced, or in rejecting claims which he thought ought not to be advanced—had, he believed, been entirely owing to this one principle which he thought it his duty and which he believed it was proper to follow—that nothing should be taken which could not be clearly written down, described, and valued. He did not say that it had always been possible to follow this rule strictly under the old administration of the law, because one sometimes met with unreasonable people who were purposely employed, not for their knowledge, but for their ignorance of the subject, and who assumed the duty to stand in the way and prevent anything from being done. These men would talk in such a way that it was necessary to meet them somewhat on their own terms, and get by their own weapons what one could from them. That was sometimes the only way to get an allowance. He therefore joined his friend, Mr. Chancellor, in congratulating Surveyors that the Act of 1871 had really put a stop to claims of the kind, and that it compelled a man to write down the facts in plain black and white, and put a fair value on what were substantial matters and not on those which were shadowy.

In defining the difference between Civil and Ecclesiastical Dilapidations, the author had made an observation with which he was not altogether prepared to agree. He had stated that in the case of Civil Dilapidations, the age of the

building had to be taken into account in almost every instance. What had really to be taken into account was the agreement under which the dilapidations arose. Sometimes the agreement compelled the Surveyor to take into account the age of the building, because it supposed or admitted a certain amount of decay as existing in the building, and the tenant was expressly excused from liability in respect of it. In other instances, the tenant was bound to put the premises in perfect repair, and where that was the case the state of the building had nothing to do with it. In Civil Dilapidations there was always an agreement to look to, but in Ecclesiastical Dilapidations there was no such agreement, and the obligation to repair was based on custom and decisions by Courts of Law. The custom had certainly varied from time to time, but he thought that modern custom and modern decisions had reduced dilapidations within much smaller proportions than in ancient times. He could mention two cases, one quoted in almost every book on ecclesiastical law, and dating back to very distant times—that of Bishop Edgington and his successor William of Wickham, Bishop of Winchester—where the claim for dilapidations included the loss of sheep and cattle and stock on the land. No such claim could be put forward in the present day. These things were not now looked upon as coming under the head of dilapidations. A hundred years ago Bishop Gibson, in his book on ecclesiastical law, stated that an incumbent was not only bound to look at the substantials of his house, but to leave it in such decent and fair condition as became his station in life and rank in society; and it was obvious, from the questions which he directed to be put to incumbents, that he intended that there should be included some of the things not comprised in the celebrated decision of *Wise* v. *Metcalf*, quoted by Mr. Crickmay.

There was no doubt that some matters were better looked

after, in former times, under the old system of ecclesiastical law, than now—terriers, for instance. In this matter the law was not altered, but neglected. He had recently had to deal with a case, where, for want of a terrier, it had proved almost impossible to ascertain the extent of the glebe. After a great deal of search, he was told that he had omitted some 14 or 15 houses which belonged to it, and with respect to which no deeds could be found.

It was much to be desired that, when ecclesiastical reformers were at work on ecclesiastical law, some steps should be taken for providing for the better registration of ecclesiastical property.

The author was correct in saying that the law of 1871 made no change at all, so far as regarded the nature of dilapidations. The most important and decided changes were in the manner of paying for them. Whereas in old times and even down to modern days, there had been a conflict between the Lay Courts and the Ecclesiastical Courts as to the position held by the debt for Ecclesiastical Dilapidations (the Ecclesiastical Courts contending that it took precedence over other debts, and the Secular Courts holding that it was postponed after other debts), the law of 1871 enacted that it should be a common debt and recoverable like any other debt. This seemed to him to be fair. It was unfair that it should be postponed, and that the new incumbent should lose the value of the repairs to be done, and it was equally unfair, where the estate was small and insufficient to pay the debts, that it should take precedence. Another alteration effected by the Act of 1871 was this, that it gave an exemption of five years on completion of the work specified. The Surveyor, as had been explained, made a report to the bishop, and, after a month, that report, if not objected to by either party, or, on reconsideration of the matter, was made final by order of the bishop and had to be enforced, and was returned to the Surveyor, to see that

the works were carried out. When the Surveyor found that the works were duly executed the incumbent obtained exemption, aud he was not liable to be called on, should he vacate his benefice, to pay anything during five years. This was a substantial change in the law, and was introduced to encourage incumbents to bring themselves within the operation of the Act.

The author had referred to the difficulty sometimes experienced in dealing with furnished houses—a difficulty which often arose in cases where the incumbent was encouraged to put himself under the Act, and being in occupation of the house, he desired to have it surveyed, and the work he should do reported to the bishop. No doubt, the difficulty of making a thorough survey under such circumstances was often considerable. In a case of vacancy it was advisable to wait till the house was empty. The law allowed the widow of a late incumbent to occupy for eight weeks, and he should advise his brethren to postpone the survey until the house were actually vacated. A Surveyor, when ordered by the bishop to make a survey of a house in occupation, must use his best judgment in the matter; but he was of opinion that the incumbent in possession got off with rather easy terms under such circumstances.

He thought the author mistaken in describing the 17th section, which authorized loans to be made by the Bounty Office, as practically inoperative, owing to the objection of the Bounty Office and the bishops to loans. As Mr. Aston, the Secretary of the Bounty Office, whom he was glad to see present, would probably explain, the statement went rather too far. Loans had, within his own knowledge, been made for purposes of repairs quite recently.

He suspected that what had happened was this:—In the first few months after the passing of the Act, and when it was supposed to be in a merely tentative stage, many clergymen, misled by the preamble of the Act (which recites

that it is for the sustentation of houses and the relief of the the clergy), jumped to the conclusion that it was intended to grant sums of money to as many clergymen as liked to ask for them. Applications were, consequently, very numerous, and, no doubt, many loans were obtained at first by persons who would not obtain them now. Some experience was necessary at first, and it was desirable to test the nature of the applications, before formulating principles on which the loans should be granted. Matters had, he presumed, now found their level. Applications were not so numerous, and loans were not granted so freely as they were; but he thought it would be found that reasonable cases were attended to in a reasonable way.

The removal of buildings set up for farming purposes was referred to by Mr. Crickmay, and the fact that the Surveyors had come to a very nearly unanimous conclusion on the subject, and admitted their removal. It was most desirable. he thought, when land was let, and a tenant put up these buildings, that it should be done under the provisions of the Agricultural Holdings Act. There should be a written understanding, thus putting all questions beyond doubt, and making it easier for Surveyors to perform their duties properly. In the absence of a written document, there would be cases in which it would be very difficult to decide whether buildings ought or ought not to be removed.

It was incorrect to speak of the Surveyor's report as the decision of the Surveyor. It was no decision at all—it remained open for a month. He was glad to say that those reports were accepted with a good deal of general contentment. He had made between 400 and 500 reports to the bishop, and had not had more than seven or eight which were carried to appeal. Two of these reports were purposely made to provoke appeals. The circumstances were difficult, and he felt that he would rather not take the responsibility of a decision. In both cases they related to chancels, and

he thought that it was part of his duty to report their dilapidations, making a charge which was rather a large one. He felt that he could not undertake to say that the incumbent had not the liability, but in both cases it was ruled that he was not liable for the chancel—a satisfactory result, for the less liability the clergyman had the better it would be for the income of his church.

The author had suggested that it might be well, after the Surveyor had made his report, that the clergy should have the guidance of some four or five persons in each diocese or each archdeaconry, or the opportunity of consulting some assessors to know how best to apply the apidation money.

He (Mr. Hills) confessed that he thought this would prove a difficult suggestion to put in practice. There was something of the kind in operation in many cases—for instance, where the incumbent applied for a loan under the "Gilbert Acts," and the bishop appointed a Commission constituted according to Act of Parliament, and the Commissioners reported on the desirability of the work proposed by the clergyman. Mr. Crickmay wished that so his assessors should also report on the desirability of the dilapidation works. Of course, it often happened that it was not advisable to do the precise works pointed out by the Surveyor in his report. Things were constantly changing, and every day made unnecessary something which was necessary fifty years before, and so it became advisable to exchange or get rid of certain buildings. On this principle, the Surveyors, when they found that some small changes had been made would practically not object to making a certificate as if no such change had been made, supposing there were no disadvantage in it; but the Act provided that the incumbent might modify the work, with the consent of the bishop and patron. Therefore, he did not see

the advantage of appointing such a Board, with powers like those of the Commissioners, who often thought of themselves that they were a very useless body, and whose operations had been described as "meeting at a parsonage house, drinking a glass of sherry, and signing the report of the incumbent." They were generally his immediate neighbours, and took it for granted that the incumbent's view was the best (which was very likely the case—he was the person most interested), and it became a matter of form. In small questions, there was no advantage in interfering officiously with the incumbent's choice.

Mr. J. K. Aston (Visitor) felt compelled, with Mr. Gordon Hills, to qualify to some extent the remarks made by Mr. Crickmay in his very able Paper as to the supposed refusal of the Bounty Office to relieve the pressing wants of clergymen in urgent cases of dilapidations. When the Act of 1871 was passed, a good many gentlemen at once sought loans, but the Act stated that the term for lending should be the same as under Gilbert's Act—31 years—and the Board asked, "How can we lend for dilapidations for 31 years—what will become of the house in that time?" Therefore, unless the bishop, patron, and incumbent satisfied the Board, the loans were not granted. Then came the amending Act of 1872, which gave the Board greater latitude as to length of term of loans for dilapidations, and since that Act was passed every fair and proper application had received consideration, and loans had been granted in all desirable cases. Some few incumbents, 70, 75, and 80 years of age, had come forward; but the Board did not think it right to relieve them, after being incumbents for, perhaps, 30 or 40 years, of the responsibility which should rest on themselves. In only a few cases had the Board been unable to make loans.

Mr. Lacy W. Ridge (Visitor) feared that he had little to add to what had been said so elaborately and so well by Mr. Crickmay, and by the gentlemen who had taken part in the discussion. He felt, when Mr. Crickmay mentioned it, that the subject of loans had been a good deal misunderstood among the clergy generally, and he was very glad, therefore, that Mr. Aston had explained how the matter stood. The clergy, who complained that they could not get loans, were really complaining that they were called on to pay what it was their duty to pay. The certainty with which the present law of dilapidations acted as compared with the law in existence before 1871, no doubt produced cases of hardship, because incumbents, at their entrance on their benefices, frequently recovered, under the old system, very insufficient amounts. If the matter was serious and the cases came fairly under the Act, he (Mr. Ridge) had observed that they were always met by the bishop, the patron, and the Bounty Board, who endeavoured, by means of a loan, to ease the pressure and to help the applicants out of their difficulty.

His attention had been lately called by Mr. Bruton, a member of the Diocesan Surveyors' Association, to a Paper in the "Church Quarterly Review," published in January last, and he was quite astounded to read in the present day the views put forward by the writer. It was distressing to see the republication of the same old fallacies which were dealt with by the Select Committee on the subject in 1876, and he had intimated as much to the editor, for misconceptions of the kind were liable to be read by the clergy, with the effect of making them feel that there might be a way of shifting their liability, instead of meeting it manfully.

He was glad to hear that Mr. Crickmay had arrived at the conclusion that all insurance schemes were essentially fallacious. The cost attending any kind of insurance scheme

must overwhelm it. Nothing could be so simple or so fair as for each man to repair the buildings he enjoys. He thought that Surveyors could not do a kinder thing than point out to clergymen the utterly fallacious character of all insurance schemes.

Mr. R. R. Rowe (Member) said that, having had considerable experience in connection with Ecclesiastical Dilapidations, as one of the Surveyors to the diocese of Ely, he had recently read a Paper on this subject to the Church Congress at Stoke-upon-Trent. An observation made to him by a clergyman present on that occasion illustrated the necessity for the passing of some Act like that under discussion. The clergyman informed him that a friend of his had obtained, under the old system, £120 for dilapidations, and directly he received the money from the executors of the deceased vicar spent the whole of it in the purchase of a grand piano for his wife, instead of on the supposed dilapidations. He had met with similar cases in the early part of his practice. Surveyors, as Mr. Crickmay had said, should act, not in the spirit of partisans, but with the impartiality of umpires; but should a doubt arise the poor parson or his widow should have the benefit of it.

Questions of cultivation were specially excluded by the Act of 1871; but gates, fences, bridges, and, of course, all farm buildings, were subjects of dilapidations. He had not been quite so successful with regard to appeals as Mr. Gordon Hills appeared to have been, having had five or six contested cases out of someth:ng like 120 since the passing of the Act in 1871. In one case within his experience the incumbent had been non-resident for more than forty years—in fact, had never seen his parish. The living was a good one, but the clergyman put in a curate at £130 a year, and as soon as he found he could get one

cheaper, discharged him, and put one in his place at £90 a year. Everything was allowed to go to the bad, and it was not surprising that his estimate for repairs came out at something like £1,000. The incumbent left a large fortune; but his executors appealed against the amount of the estimate, and the consequence was that the benefice had to be mortgaged to make up the deficiency. In another case he put the valuation at something like £900. The clergyman, either acting on his own inclinations or under medical advice, circumnavigated the globe no less than three times, and during his absence the repairs were entirely neglected, and the place got from bad to worse. Finally a Surveyor was called in, who had no special acquaintance with the work, and was, moreover, too old to look to the roofs and other parts of the buildings difficult of access. In the end a loan was, he believed, obtained from the Bounty Office.

He could not agree with Mr. Crickmay's suggestion as to the appointment of assessors. Commissions like those referred to by Mr. Gordon Hills were common enough. The bishop appointed four or five clergymen, and, in his (Mr. Rowe's) diocese, a couple of magistrates, for the sake of getting a lay opinion as well; but he could not see what benefit would arise to any one from the appointment of assessors, or where the money was to come from to pay the expenses.

All projects for establishing an insurance fund in lieu of dilapidations he looked upon as visionary and impracticable. There was a great talk about dilapidations among the clergy and a good deal of grumbling in their newspapers; but many of the complaints would not bear investigation. A few weeks ago, three benefices where injustice was said to have been done were referred to, though not by name, by a writer in one of the Church papers, and he (Mr. Rowe) applied to the gentleman who signed the letter, asking him for the

names of the places. The writer of the letter informed him, in reply, that he had forgotten the name of the first one, on which he had hung his remarks, and the names of the other two were written in such an illegible manner that it was impossible to make them out. He laid the note before the Ecclesiastical Surveyors' Association, to see if any of the Members could decipher the writing, but it was impossible to do so; so he took it that the whole complaint was without foundation.

Progressive decay was met, he thought, to a great extent, by Section 52 of the Act, which gave the Surveyor power to make a certificate for deferred work; and Section 50 gave them power to grant special certificates with regard to substituted work, so as to make the measure as elastic as possible. He was strongly of opinion that the Act was a great benefit to the Church and the clergy.

Mr. G. R. Crickmay thanked the Members for the kind manner in which his Paper had been received. The task of preparing it had been greatly lightened by the perusal of the able reports by brother Surveyors, to which he had already referred.

Exception had been taken to his suggestion that Boards of Assessors should be appointed. He had merely thrown it out as an idea, and by way of eliciting discussion. He felt strongly that something should be done to improve the present system of making reports for loans under Gilbert's Act, and it had occurred to him that the appointment of assessors would probably result in their calling in the Diocesan Surveyor to advise them on practical points.

It had been remarked by Mr. Mann that the decay of floors might be arrested, if not prevented, by ventilation below. All practical men were aware of the importance of a free circulation of air for the prevention of decay and dry

rot; but in many old parsonage houses the floors were put directly upon the ground, and the occupier could hardly be called upon to alter the construction. All he could be asked to do was to repair that which was decayed.

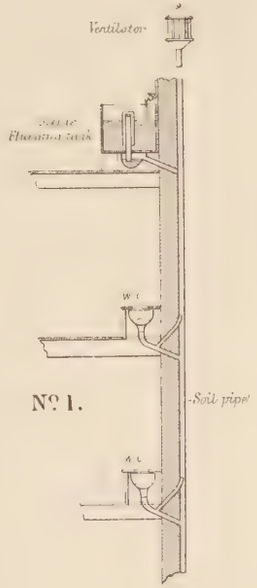
He was glad to hear that the governors of Queen Anne's Bounty and the bishops had made up their minds to allow money to be advanced for repairs. He was under the impression that the governors had come to an opposite determination.

The President, in closing the discussion, said that one proposition, and one only, seemed to have been made and answered, and that was that there should be some method of insurance substituted for the present somewhat uncertain mode of getting paid the amount of the dilapidations when ascertained. Mr. Lacy Ridge appeared, however, to think that no plan of the kind was feasible. It would be a desirable thing if some plan could be discovered whereby not only the repair, but, when the period of natural decay rendered that operation necessary, the restoration, of parsonage houses and buildings might be ensured.

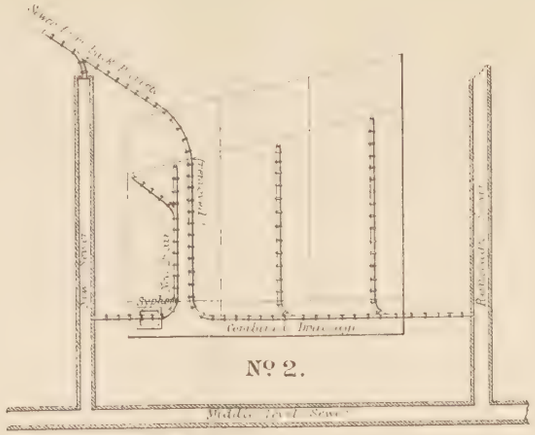
It was, no doubt, true as had been said, that it was right a man should repair the property he enjoyed; but it would not be right that the man who happened to be the last who lived in an old house should have to rebuild it when the time came, as it must come, when no amount of repairs would keep it in existence for a successor.

The vote of thanks having been put and carried unanimously, the Meeting adjourned.

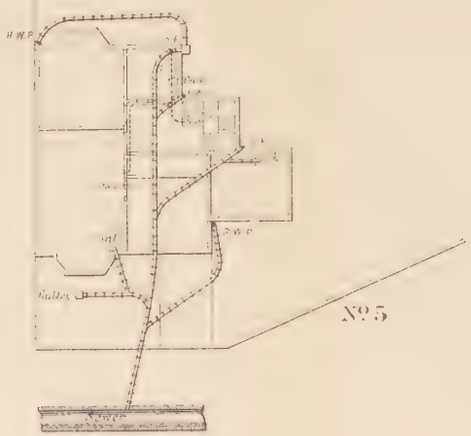
INSANITARY CONDITION.



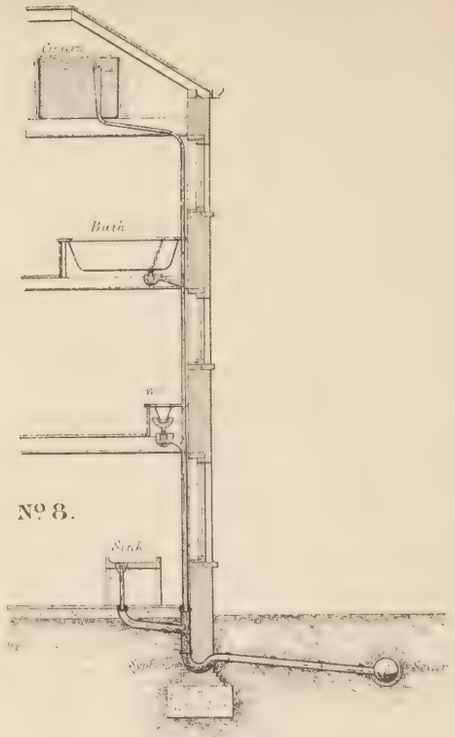
No 1.



No 2.

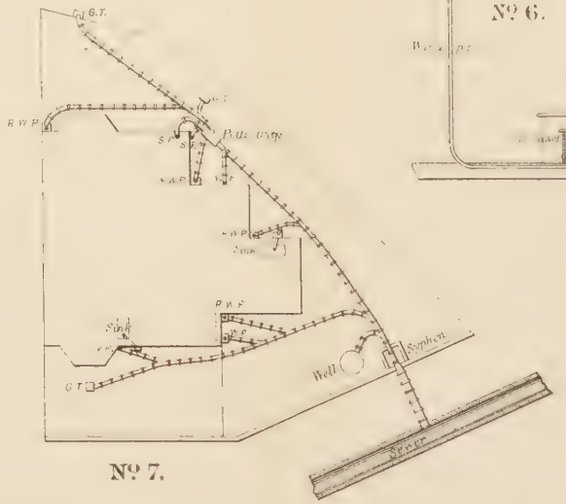


No 5.

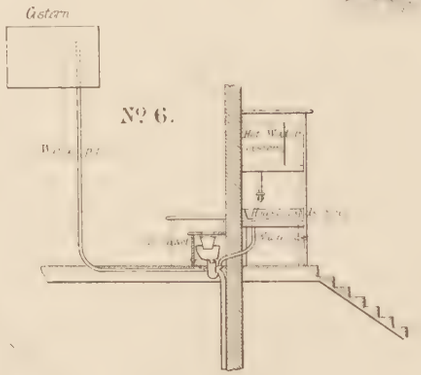


No 8.

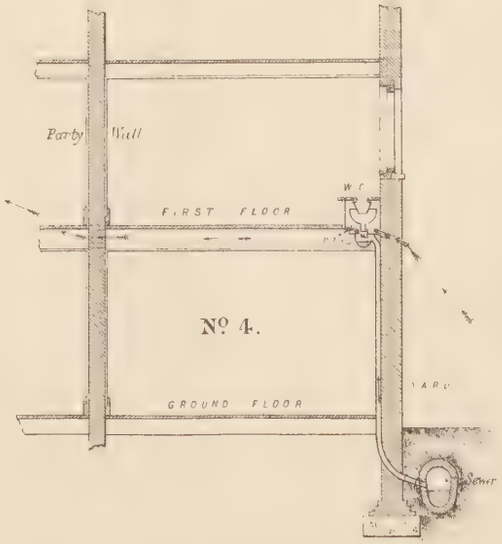
SANITARY CONDITION



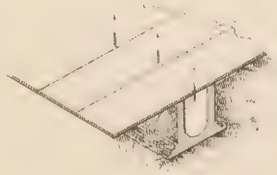
No 7.



No 6.



No 4.



No 3.

C.F Kell Lith Castle St. Holborn E.C

No. 95.]

SANITATION AS AN INCREMENT OF VALUE IN HOUSE-PROPERTY.

By H. H. COLLINS (Member).

Read at the Ordinary General Meeting of the Institution of Surveyors, *March 7th*, 1881.

THE PRESIDENT IN THE CHAIR.

The Institution being recognized by the Legislature as an authority in the work of Sanitation, no remarks of an apologetic or prefatory nature are required in introducing the subject of this Paper to the Members. The great value of our Papers consists in their practical character; and I shall endeavour to emulate the example set by Members of far greater ability than myself, by confining my observations, so far as the subject will permit, to the tersest limits.

The guiding principles of preventive medicine, although long known, have, if appreciated, not been practised by the medical profession until the last few years. The endeavour to cure has been far greater than the endeavour to prevent.

Sanitary science has advanced, but with very gradual and creeping footsteps: its necessity has been recognized only through the accumulation of dire calamity.

It required the deplorable sacrifice of thousands of the lives of our soldiers during the Crimean War, the visitations of cholera, an irreparable loss in the Royal Family, and the serious illness of the Prince of Wales, to rouse the nation from its torpor; to give an impulse and to lend an aid to sanitary science, which (although yet in its infancy) has, happily, not since flagged.

The physician, tracing the pathology of disease to neglect of sanitary precautions, "threw physic to the dogs," and demanded the aid of professional skill to provide those great requisites of health—pure air, pure water, and absolute cleanliness.

This skill was not slow in presenting itself, and there suddenly sprang into existence a class of experts, who dignified themselves by the title of "Sanitary Engineers."

In tacitly permitting the appropriation of this exceptional and distinctive knowledge, I cannot help thinking that both the Architect and the Surveyor have done themselves a great injustice. Their every-day work must afford them special facilities for a due comprehension of the subject, and qualify them for its practical application; indeed, I fail to understand how either can properly exercise his calling without an ample acquaintance with the laws of hygiene.

Our President has called attention, in his Opening Address, to the importance of the study; and both this Institution and the Royal Institute of British Architects have recognized its value by requiring future Members to pass an examination in the principles of Sanitary Science.

The extension of Sanitation is retarded by its necessary expense; but once make an Englishman feel, through his pocket, that attention to it *pays*—that the goddess Hygeia is worth suing, is pecuniarily grateful, and I venture to assert that her laws will become universal and the neglect of them exceptional.

The object of this Paper will be to demonstrate that the principles of Sanitation are vitally incorporated with our professions, and how we can stimulate their practice not only with benefit to our fellow-men, but with profit to ourselves.

It has been urged that, notwithstanding all the efforts of

sanitary legislation, the death-rate has been stationary, and, therefore, that the people have not been benefitted thereby. If this were true, the deduction drawn therefrom is false. Dr. Farr has mathematically demonstrated that the health of a community is directly as their density or proximity; or, in popular language, he proves "that the nearer people live to each other the shorter their lives." Now, the town populations in England have increased, during the last three decades, from about 9 millions to 14½ millions (probably the next Census may show to 16 millions); and, if this be so, the sequence of the above law would show an increased mortality. But, in truth, it has been diminishing, for we find that the average of mortality, during the thirty years referred to, was 22·37 per thousand in England and Wales, and that from 1871 to 1877 the mortality was at the rate of 21·64, or ·73 per thousand diminution, or a saving of life of 116,800 persons in England and Wales, or of nearly 17,000 persons per annum; and this can only be attributed to the persistent efforts of sanitary science affording the people purer air, better drainage, adequate water supply, unadulterated food, better lodging, and cheaper and, consequently, more abundant clothing. If we wish, however, to realize the improved conditions of life, let us take a retrospective glance, dating from two centuries since. Dr. Lyon Playfair has prepared a tabular Statement of the Death-Rate of the Metropolis from 1660 to the present time, gathered from imperfect data, it is true, but sufficiently exact for my present purpose.

Thus, the annual death-rate in London—

From	1660	to	1669	was	80·0 per thousand.
„	1681	„	1690	„	42·1 „
„	1716	„	1755	„	35·5 „
„	1846	„	1855	„	24·9 „
„	1871	„	1880	say	23·0 „

But, irrespective of these facts, a stationary does indicate a lower or reduced death-rate; for we must not forget that our towns have, by immigration, been converted from mere villages into cities; that, at the beginning of this century, England contained no town, with the exception of London, exceeding 100,000; that now she has sixteen; and that, as Dr. Playfair remarks, under these circumstances, the causes conducing to sanitary improvement must be at least equal those tending in a contrary direction.

Two hundred years ago the population of England (says Lord Macaulay) was 5½ millions, as estimated by the tax on hearth money; of London, little over half-a-million, now over 4 millions; and in England in 1877 it was 26 millions. The natural increase of population in England and Wales was 387,684 per annum. With this sparse population, nevertheless, the deaths were 80 in 1,000 per annum; and this when the Metropolis was surrounded, within an easy walk, by pleasant fields, delightful gardens, and open country; when Enfield possessed but three houses in an area of twenty-five miles circumference, and sportsmen wended their way there to hunt the deer which gathered in their thousands, or the wild boar, wolves, and foxes which then abounded there; when Regent Street formed the home of the woodcock, and excellent sport was to be obtained by the sportsman who ventured through Oxford Street bounded by flowering hedges, through Tyburn, and into the pleasant village of Edgeware; when three or four houses marked the site of Piccadilly; when Golden Square had not been commenced, and Bedford Square was considered as a monument of architectural beauty which all foreigners were invited to inspect as one of the sights of London. Here Dr. Farr's law would be irreconcilable indeed, were there not the disturbing fact of gross neglect of sanitary laws amongst the people at that period. Life was coarse, and

filthy habits prevailed alike in town or country. In the Metropolis, even after the Great Fire, the houses, although better than those formerly existing, were built in narrow uncleansed lanes or alleys, some of which still exist. "In Covent Garden a filthy and noisy market was held close to the dwellings of the great; cabbage stalks and rotten apples accumulated in heaps at the thresholds of the Countess of Berkshire and Bishop of Durham. Rubbish was shot into Lincoln's Inn Fields, and St. James's Square was a receptacle for all the offal, dead cats and dogs, of Westminster; and these were deposited under the windows of great magnates of the realm, the Norfolks, the Pembrokes, and Ormonds." As in the present, so in the past it was due to fortuitous circumstances, and not to a sanitary desire, that the former was rescued from its unhealthy state; for it was not until Sir Joseph Jekyll, Master of the Rolls, was there knocked down and nearly killed, that palisades were erected and the pleasant square laid out.

The latter was enclosed, and after much opposition, through an Act of Parliament, 12th Geo. I., c. 25. The dwellings of the rich were, according to our present notions, squalid in the extreme. Erasmus tells us that the floors were made of loam, strewed with rushes, impregnated with fishbones and broken victuals, saturated with urine of dogs, and strewed and covered again and again with rushes; the walls, never cleansed, were hung with tapestries filled with the dust of years; the pavements were detestable; the drainage so bad that the gutters became torrents of animal and vegetable filth, increased by the contents of the utensils which were every evening thrown into the streets. Added to this the highways were in darkness until the last year of Charles II.'s reign. The atmosphere became noisome, and duly prepared for the propagation of those dire diseases which ravaged the country from end to

end. In the year 1685—a healthy one—1 in 23 of the inhabitants died in London, as I have said, 44 in 1,000. Macaulay writes, that "the difference in salubrity between London of the 19th and 17th centuries is far greater than the difference between London in an ordinary season and London in the times of cholera. Then men died faster in the purest country air than they now die in the most pestilential lanes of our towns; and then men died faster in the lanes of our towns than they now die on the coasts of Guiana."

Surely no better evidence could be afforded of the blessings which sanitary science has accorded us, and no greater trophy of medical skill than the fact that, guided by hygienic principles, diseases, which were ordinary and rife, are now only known and remarked by their infrequency, if not entirely extirpated—the sweating sickness, the dancing, mewing, and biting manias. The black death, plague, and cholera are practically extinct; small-pox should be; and of ague Dr. Richardson writes, "that, whilst the Metropolitan physician looked upon it as an ordinary disorder, it is now so rare that a practitioner may live for years and never see it."

Mr. Rawlinson states that, in 1866, 25 towns were examined by the Medical Department of the Privy Council, and the investigation proved that, though their sanitary condition was still admittedly imperfect, the death-rate from typhus had been reduced 12 per cent., that from diarrhœa 18 per cent., and that the reduction of the general death-rate was more than 9 per cent. In Salisbury, the mortality was reduced from 28 per 1,000 to 17 per 1,000.

There are those, however, who are still sceptical, pointing to the good old times, boasting of the immunities which our progenitors enjoyed, and vaunting that, although living in surroundings which the Sanitarian would pronounce vitiated

and unhealthy, they are still in the enjoyment of health and strength; who pronounce essentials of health unnecessary refinements, and consider sanitary science as the whims and vagaries of the expert. Statistics, historical testimony, and argument are useless to such as these, and one can only say, with Mr. CHADWICK, "If a man chooses to think there is no need of insuring his house, because his father lived for 50 years without a conflagration, he is welcome to do so, and has a right to his opinion."

The history of sanitary legislation before the Fire of London is of a very meagre description. I believe the first recorded instance was in the 35th year of EDWARD I., when a Commission was issued to scour and cleanse the River Fleet. In the 19th year of CHARLES II., the duties of providing for sewerage of the City of London was vested in the Common Council; and various Acts were passed in the reign of GEO. III., GEO. IV., which were repealed by the 14th & 15th VICT. c. 91, since repealed by the present Metropolis Management Act, which was passed in 1855. Various local Acts of questionable sanitary value governed the outlying districts.

Most, then, of the various Sanitary Health Acts have emanated, as I have said, from the spasmodic fears of the people, a few from the wise prescience of private Members of Parliament, some from the wisdom of the Government of the day. Disjointed as they are, we may be thankful for them, as ameliorating the condition of the people. I may mention, *inter alia*, the various Nuisance Removal Acts, Public Health Acts, the Registration and Inspection of Common Lodging Houses, Smoke Prevention, Alkali Acts, Factory Acts, Brickfield Acts, Canal Boats Act, Pollution of Rivers, Public Baths and Wash-houses, Metropolitan Local Management and Building Acts, Torrens' Act, Artizans and Labourers' Acts, Model Lodging House

Acts, and the various special Sanitary and Building Acts now in force throughout the United Kingdom, each applicable and beneficial to the peculiar requirements of its immediate locality.

That these Acts have worked much advantage to the health and social well-being of the people, may be gathered from a perusal of the periodical Reports of the Metropolitan Board of Works, the Vestries connected therewith, and the various Boards of Health distributed throughout the length and breadth of the land. Much remains to improve and amend; but future legislation must be rendered comparatively easy by the harvest of experience and knowledge now being garnered in the above-mentioned documents, which define with accuracy the progress made in the sanitary work of the kingdom.

The literature connected with the subject dates from ancient and Biblical periods; but its practical and useful commencement may be said to begin with the Report compiled by Mr. Chadwick, C.B., in the year 1842, to which the Poor Law Commissioners drew attention in the following year. It pointed out the defective condition of the sewage and drainage of the Metropolis, and the inadequacy of existing laws to meet the exigencies of the subject. Then followed, in 1844—1855, the Reports of Commissioners appointed to enquire into the state of large towns and populous districts, which disclosed the evils attending defective drainage, neglect of cleanliness, ventilation, and want of proper water supply. The advent of these two Reports may be said to have originated modern sanitary legislation. The most eminent Sanitarians—Simon, Chadwick, Rawlinson, &c., now household names—were examined; and, read by the light of experience, the evidence they gave remains a monument of their truth, earnestness, and perspicacity.

A fresh impulse was given to the subject through the misfortunes of the Royal Family, and from 1861 to the present moment writings on the subject have never ceased. The bookshelves of a good-sized library might be filled with these productions, in the shape of volumes, pamphlets, papers, enshrined or entombed amongst those of learned societies, sanitary associations, daily journals, professional transactions, text books, &c. Amongst the authors, many are most distinguished writers; to mention but a few, Dr. Farr, Dr. Richardson, Mr. Chadwick, C.B., Dr. Simon, Captain Douglas Galton, Professor Corfield, Mr. Rawlinson, Mr. Baldwin Latham, Dr. Angus Smith, Dr. Haviland, and Mr. Pringer Teale, the Registrar-General's Returns, and last, but not the least, Mr. George Godwin, one of the earliest pioneers of sanitary science, the promotion of which he has incessantly advocated and illustrated in the pages of the *Builder*.

To the Architect must be left the numerous details of plan and design which compose the requirements of a sanitary dwelling; to the Surveyor, a due appreciation of increased or diminished value due to the manner in which the Architect has applied hygienic principles to the structure.

Nor does this involve any original element in the principles of valuation, for estate and land agents have always regarded what may be termed the sanitary condition of land as a large increment of value. The nature of the soil, its depth, its composition—if retentive sub-soil or stiff clay—its drainage and capabilities, its aspect, contour, and elevation, its water supply, &c., have always been elements of consideration in determining value.

It would be impracticable, within the restricted limits of this Paper, to do more than indicate some of the considerations which demand the attention of the Architect

and Surveyor versed in sanitary science. I will briefly epitomize the more salient, and will illustrate my meaning as I proceed.

1st.—The Nature of the Aspect.

If rooms are planned without due regard to the points of the compass, they may be rendered not only uncomfortable, but unhealthy.

Position.

This is an important element of sanitary value. The eulogiums so often seen in advertisements describing a house "embowered in a charming valley, nestling amongst verdure, shut in and protected from inclement winds, &c," read, from a sanitarian point of view, not as recommendations, but evils to be shunned. They mean stagnant air and rheumatic atmosphere. Plenty of pure air should always surround the dwelling; the more free the site stands, the greater its sanitary value. Thus, in towns, detached or semi-detached villas with free spaces all round are of more value than houses built in terraces. There are fashionable streets in this Metropolis in close proximity to narrow lanes, courts, and alleys which materially decrease their sanitary value, and, if the evil were sufficiently appreciated, would largely diminish their money value; the devitalized and disease-laden air which proceeds from those poverty-stricken abodes penetrates into the adjoining dwellings, poisoning and tainting their interiors.

Captain Galton illustrates my meaning by an event which occurred during the Crimean War. The 42nd built their huts on an open plateau. The 79th, thinking they would be more snug and sheltered from the wind, built theirs on the soft clay in terraces cut close under the hill.

The 79th were half down with fever, while the 42nd had no case of fever at all.

Mr. Rawlinson was sent out to rectify the sanitary defects, and the first thing he did was to put ventilators in the roofs, and cut away the ground and dig a drain behind the huts of the 79th, thus allowing air to circulate round them; the result being that there was no more fever.

For the same reason an estate may be entirely ruined by the want of sanitary knowledge in planning its streets, &c., or by its proximity to low-class property. As an instance of increased value resulting from due regard to sanitary considerations, I may mention the estate of Sir Maryon Wilson, at Hampstead, where, by the judicious laying out of wide roads planted with trees, the land readily realizes over £7,000 per acre, and is being rapidly covered with expensive houses.

Soil.

This may be either permeable or impermeable, of gravel or of clay; both have their dangers. Mr. Baldwin Latham has called attention to the fact that in all soils there is a continued flux and reflux of running water, and it will, therefore, if impregnated with putrescent matter, of course, deposit its organisms in the interstices of the soil; these, under favourable circumstances, will give off emanations which will be drawn into the structure built over them. (Gravel, as you know, is used for filtering the London waters.) So, again, Petikofer has shown that gases travel with great facility through soils, and he mentions the fact that, in one instance, gas found its way into a house not furnished with a gas supply, situated some 20 feet away from any gas mains, travelling through the foundations, cellars, and flooring; hence it follows that sewer vapours can as easily, by the same channels, find their way into a house.

Experiment has shown that one-third of the bulk of a gravelly soil consists of air—that is, the space between stones and particles of sand filled with air amounts to one-half the space filled with gravel. Imagine a drain leaking into this soil. The ground air would be charged with products of decomposing offensive matter and of those abominations causing zymotic disease. The house built upon such a soil would be full of warm air, and up the chimneys would rush a draught, causing the entrance, when the doors and windows are closed, of a considerable amount of this ground air, laden with germs of disease and, perhaps, of death. The soil may therefore become a reservoir for impure water and destructive air. Add to this, that the sites of houses are more often than not mere dust heaps, and we have a state of things the effects of which are terrible to contemplate. I know of a fashionable locality where over 5 acres are built on rubbish thrown in to form the foundations of the houses.

Dampness, which aids decomposition and produces malarious and other evils, has to be provided against, and on this point too much care cannot be taken to ascertain the level of the subterranean water. I need not add that no foundation should be situated below flood line.

For the house itself, the most effectual remedy is to lay a good course of concrete over the foundations, covering the same with asphalte or other impermeable material; to introduce, above the footings of the walls, glazed earthenware ventilating damp-proof courses; and to thoroughly drain the surrounding soil.

Dry areas should be built against walls, to prevent contact with soil, and these should be well ventilated.

It is essentially necessary that all ground-floor joists should be covered with flooring, tongued or rebated, to prevent the possibility of any draft coming through them.

Materials.

It must not be forgotten that all building materials are more or less porous in their nature, readily absorbing wet, and affected by climatic influences. Thin walls are, therefore, to be avoided, and they should be constructed of the best materials of their several kinds. It is a common practice, even with so-called "respectable" builders, to use up road drift in the composition of their mortar, embodying therein *débris* of a very prejudicial character; so, again, "Jerry" builders, in internal plastering, use "slop," often supplied by the Parochial Authorities, and which contains, amongst other deleterious substances, horse dung, garbage, and even offal. This is worked up with a small quantity of lime and thrown into the walls, possessing little adhesion, and always ready to engender disease among the unfortunate occupants of the house. The timber and supports should not only be of good quality, but should be of proper strength; if not, they affect the stability of the structure, and, in so doing, disturb its sanitary arrangements. Captain Shaw calls attention to this under the head of "Economic Building," and considers that a house built with due regard to sanitary conditions should have a diminished fire insurance rate. It is a common practice amongst "Jerry" builders to use up old materials in the construction of "new" houses, and it is on record that materials from fever hospitals and infected houses have been incorporated in modern buildings. The very mortar has been screened and re-used, to supply the place of sand. Of course, experience is required to ascertain if these things exist, because paint and paper cover a multitude of evils, disguising bad workmanship and materials; but a little inquiry and shrewdness will always ensure detection. The character of the builder is also a good criterion.

Planning, &c.

Attention should be directed to the relative position of doors, windows, and fireplaces, vicinity of rooms to each other, locality of w.c.'s, sinks, dust bins, and other sanitary appliances: for example:—whether the kitchen is so located that the smell of the food invariably ascends to the upper rooms; whether the scullery is so arranged that it ensures effluvia and dampness throughout the premises; whether the sinks are placed next the external walls and against windows, so as to afford plenty of light and ventilation; whether the w.c.'s and lavatory accommodation are in the centre of the house, or are carefully positioned so as to be external thereto, and are well lighted, ventilated, and cut off from communication with the interior of the house, and generally, whether the house has abundance of light, is free from dark and dank corners, so that there is an air of cheerfulness over the same. It is common experience, whether in the house, school, or hospital, how much the character of light influences the health of the occupants.

Heating, Artificial Lighting, and Ventilation.

These three requirements are intimately associated, and are difficult to separate.

So far as my experience and reading extends, there seems to be a general consensus of opinion that open fireplaces are, at all events, best suited to the habits and climate of this country. I am not therefore an advocate, as Dr. Carpenter is, of putting a tax on them—in fact, going back to the obnoxious hearth-money tax, which prevailed in the time of Charles II., any more than of a reimposition of the window tax. I would rather direct attention to so constructing our stoves as to make them practically smoke-consuming. There should be fireplaces in every apartment,

as they not only warm, but *ventilate* and introduce fresh air. They should be as far away from the doors as possible, and the latter should be so hung as not to create draughts.

The hall and staircases should likewise be provided with fireplaces; but, if this be impracticable, some description of hot-water or gas apparatus should be provided for this purpose, as they form the lungs of the house, and may be an unmixed good or an absolute evil. The w.c.'s, &c., often pour their noxious vapour into the hall and staircase, which, being colder than the rest of the house, condense it and often occasion illness of a fatal character. There are gas stoves now invented which consume the impure vapour and condense it, giving warmth and light simultaneously. The gaspipes should all be exposed to view, thus rendered easy of access, and should *always be tested;* they should never be composed of any other material than iron. It is common to employ a metal pipe, called in the trade "tripe," which, from its facility for bending, saves labour at the expense of health; in manipulating it, small cracks are caused, permitting gas to escape in infinitesimal volumes, yet sufficient to poison the atmosphere. *Ventilation* is amongst the vexed questions of sanitary science, some arguing that the pure air should be admitted from the top of a room and the impure air carried away at the bottom, others contending for the opposite; but all agree that it is requisite that the air of a room should be renewed frequently, and that no process is more fatal to health than re-breathing expired air. Dr. Angus Smith proves that pure air prevents organic bodies from decaying, and he draws this syllogistic inference: "If these bodies do not putrefy, it is because the air is pure; if pure air does not allow putrefaction, and if putrefaction is connected with disease, then pure air will prevent *all* those diseases which are capable of being carried through the means of air." My own practice is to admit

the air vertically about 5 feet from the ground, warming it through the firegrate when necessary, and carrying the impure air and the products of combustion through special flues built next the kitchen flue. There are many simple expedients of an inexpensive character for proper ventilation. Most of these are probably known, and have been applied by Members of the Institution; and it would occupy too much space to enumerate even a few of them.

Water Supply and Storage.

Pure water is one of the principal necessaries of healthful life. With our present arrangements it is excessively difficult to obtain it. Even if it be delivered comparatively pure into the main, it stands the chance of being impregnated with impure matter by proximity to gas mains and sewers, for if the joints of the pipes be ever so well made, there is still the process of "endosmosis" and "exosmosis" to be contended against; it should be our endeavour, therefore, to preserve it *at least* in its diminished purity. The cisterns should not be placed, as they commonly are, either in some narrow inaccessible corner under the eaves of the roof, or in the scullery close to the sink and in the noisome atmosphere which usually pervades this apartment. On the contrary, every house should be provided with a cistern room as easy of access as any other chamber, with plenty of light and absolute cleanliness.

The cistern should be of iron or slate, and should be covered so as to prevent the inevitable dust finding its way into it; and the water should be carefully strained before being delivered into the service pipes. Separate cisternage should *always* be provided for w.c.'s and housemaids' sinks, and care should be taken that hot and cold water service-pipes are not placed in contact with each other. All potable

water should be delivered into a filter (I prefer the spongy iron filter) and drawn therefrom.

I need not add that a constant supply is much to be desired, but even then storage of household water will be requisite.

Drainage.

This is not the *alpha* and *omega* of Sanitation, although deserving great care and consideration, for, perhaps, no part of the construction of a building is more capable of destroying the purity of its atmosphere. Drainage has, therefore, received the largest attention from Sanitarians, for it cannot be sufficiently repeated that pure air is the greatest essential of life, many diseases having been traced directly to atmospheric impurity; and, although opinions may differ as to whether the particular disease is the result of germs, spores, or glandular secretions, all agree that, if the system be debilitated by breathing infected air, illness of specific types, such as typhus, relapsing fevers, measles, scarlet fever, and other well-known zymotic diseases, will sooner or later find a congenial soil in which to flourish. Captain Galton writes, "that incontrovertible facts prove that all these diseases are liable to attack us where putrefying organic matter passes into our system either with the air we breathe, the water we drink, or the food we consume."

Owing to imperfect knowledge and want of experience, the sewers were originally constructed of improper shape, with materials of bad quality and description, and were laid with inadequate gradients; unfortunately the majority of them still exist, although from time to time the various Local Sanitary Authorities are exercising their best efforts to improve the old sewers or replace them with new ones. These sewers have been designated "elongated cesspools," giving off deleterious morbific gases, and inhabited by

vermin, the one or the other being ready at any time to enter the house. Accepting things as they are, evidently then the first and most sensible procedure is to prevent the possibility of either finding admittance, by cutting off the main sewer from any connection with the house drainage and arranging that, if any sewer gas passes between the interception and the sewer, it shall escape in such a position as to be rendered innoxious; this is effected by means of a syphon trap with ventilating pipe carried to the highest point and away from the building.

A vermin flap is inserted in the sewer, so as to prevent back flooding and the ingress of rats, &c. All drainage should, if possible, be *external* to the house and, where this is not practicable in existing houses, should be laid in specially-prepared trenches, and would be better if composed of iron, with joints made in lead, than if constructed of earthenware.

The main drain, which need seldom be more than 6 inches in diameter, should be laid to as steep a gradient as possible, and disconnected from the house by means of an open chamber, also trapped and ventilated.

All rain-water pipes should discharge either with shoes on to the pavements or on to "Dean's" traps, so that the soot, &c., which comes down with the water can be emptied out at intervals.

The waste pipes from sinks should be received into grease chambers or large-sized "Dean's" traps. Their overflows should be carried into the open chamber above referred to; waste pipes from baths should be similarly treated. Thus, then, there is no possibility of the impure air arising from sewer or house drainage finding its way into the house. Sometimes there are special difficulties to be overcome, but the system I have suggested can be practically carried into execution. It is necessary, however, under all and every circumstance, to test the work after it has been

executed. There are various methods of doing this; either by sulphur fumes, or by filling the pipes with water, turning up their ends, and observing whether the water sinks or not. It is necessary, however, to be careful that the builder does not deceive you by putting in a plug of clay.

In old work it is necessary to ascertain whether the gradient is sufficient to flush the pipes, and the condition of the interior of the pipes. This is easily discovered by running some water through them. If it emerges in a dark, turbid, and dirty state, the pipes are simply pipes of deposit, and must be taken up; if the gradients are correct, a piece of cork, paper, or other light substance thrown down the closet, the time being taken accurately (from its ingress to its egress), will solve the question.

Plumbing.

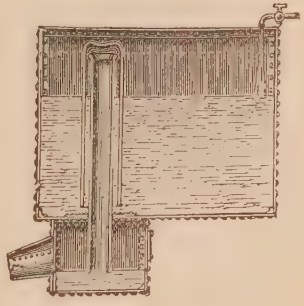
The plumbing work is always a source of annoyance, expense, and danger, the ignorance, cupidity, and obstinacy of the workmen generally proving obstacles to its being properly carried out. Great care and caution are, therefore, necessary in its arrangements. Water-closet apparatuses should always be of earthenware, without complication of metal fixings, and without traps—such as Pearson's twin trapless closets, Smeaton's Eddystone closet, or Dent and Hellyer's vortex closet. Pan closets with their filthy containers and obnoxious D traps, which form concentrated retorts, distilling their impurities into the house, should ever be avoided. Dr. Jenner has designated the D trap as a double D, "a desseminator and a destroyer." They are double D-D in every sense of the expression; their use is still prevalent, and cannot be too greatly discouraged. The soil pipes should be carried externally to the house; care should be exercised in their jointing, fixing, and supports, and they should be open from top to bottom, so as to ensure a constant permeation of pure air through the same. In some

cases it is desirable to form them with an "upcast" and "downcast." But an inexpensive and efficient arrangement is shown by the diagram—a simple cowl (fig. 1) answering all purposes. The soil pipe discharges into an open air chamber. Traps as a rule are misnomers; they generally catch everything but that which is required of them, and many an illness is caught by their use. They are liable to be emptied by many causes—by heat, warm water thrown down the pipe or into the sewer, by exhaustion of air causing partial vacuum, or even by a sudden rush of water passing from sink to sink or closet to closet. They possess other and equal dangers: they are capable of being forced by the pressure of gases, and the water which they contain seizes with avidity on the impure gas, becomes saturated, and evaporates on the house side into the interior of the dwellings. They should never be used except for the purpose of preventing back draughts, and then I employ "Bower's traps," which swill out the trap at each discharge, and mechanically close up the aperture by the floating of an India-rubber ball. Bronchial affection has often been caused to the servant, who has inhaled the impure air finding its way up the waste pipe of the kitchen sink; but if a 4-inch earthenware pipe is used, capable of being periodically brushed out, open at bottom and closed at top with a Bower's trap, with ordinary cleanliness no evil results can arise. All waste pipes, whether to sinks, baths, lavatories, or cisterns, should be so treated. The bath, formerly a luxury, now happily a necessity, may be rendered a source of great danger, if not properly positioned and fixed. The best material is either tinned copper or earthenware. The inlets and outlets should be distinct and in every way separated; the waste so arranged as to allow of sweeping out occasionally, and trapped as I have suggested, and should discharge into the open air by a separate conduit into and over a "Dean's"

trap; the epidermis and impurities of the body being thus thoroughly disposed of each time the bath is used and flushed. The use of urinals in the interior of houses should, I think, be discouraged; they are difficult to keep clean, are wasteful of water, and indecent in appearance. The best are those composed of earthenware, with a treadle action, so that they ensure flushing every time they are used. They should not be connected with w.c.'s, but should have their own waste pipe, which should be arranged with an after-flush, so as to "swill" out the pipe at every discharge. Lavatories or sinks should be of slate or earthenware; their plumbing arrangements should be as I have above sketched, with care as to trapping and discharge.

A house with the arrangements of drainage and plumbing so constructed would, I venture to assert, be in good sanitary condition, although there are many other matters requiring care and attention which time forbids my entering into.

Assuming, however, that the Sanitary Architect has judiciously exercised his skill, and at the termination of his labour leaves all complete, there is generally one great difficulty still to contend with—namely, the want of attention, and the carelessness of the inmates and their domestics. People are apt to consider that, unlike all other things, sanitary apparatuses and contrivances once fixed will last for ever, without further attention or expense. An ingenious apparatus, invented by my friend, Mr. Roger Field, and exhibited by the courtesy of his agents, Messrs. Scott & Read, has met this difficulty to a great extent. This syphon is so constructed that it can be regulated to automatically discharge the contents of a cistern



of any desired capacity, at stated periods, through the whole system of drainage, and thus effectually flush the same. I have applied it, with success, to private houses and hospitals, and it has the great merit of being not only unerringly effective, but likewise of being inexpensive.

If the householder, however, neglects the demands of decent and manifest cleanliness, requiring only ordinary supervision and attention, he has himself to blame, and not the arrangements provided; and the law should then step in to complete the work of the professional man.

I will now glance at a few examples selected from my own experience, which will demonstrate the evils of neglected Sanitation.

A client about to purchase a recently-erected freehold mansion, at Marlborough Gate, consulted me before signing the contract. As it involved an expenditure of some £20,000, I was particularly careful. The builder solemnly assured me that the drainage and sanitary arrangements were simply perfect. However, *inter alia*, I had a clause inserted in the agreement, whereby the builder engaged himself to rectify defective drainage or sanitary errors. Upon investigating, at the Vestry Offices, the plans of the sewerage of the surrounding districts, I noticed that a sewer from a somewhat squalid district passed through the site of which this house formed a part, and emptied itself into the old Ranelagh Sewer. The Vestry Surveyor was *sure* that this had been diverted, but was somewhat uncertain as to where it had been diverted to. The builder was more positive, and I was equally credulous. Upon examination, I found that it passed directly under the centre of the house, occupying in its course the kitchen, wine cellar, and servants' hall, and at a depth of some 5 feet below the surface (fig. 2). Thus, law had been defied, convenience sacrificed, and healthy occupation was rendered *impossible*.

The diagram (fig. 2) showed the houses, which some

of the Members might recognize, and also the pipe referred to. The three houses were connected together, so that if a stoppage took place there my unfortunate client would have the benefit of it through his house. After much trouble I had this disconnected and a new sewer built, and the house properly arranged. If not he would have had the public sewer running under his house.

This, however, was but a small part of the mischief, for (as it was said), through the prohibition of the Engineer of the Board of Works, no connection had been permitted with the Middle Level Sewer, which ran down the Uxbridge Road, and the three houses were drained by a combined system, so that, as you will perceive by the diagram, my client's house would not only have had the whole drainage of an insalubrious neighbourhood percolating through his house, but, in the event of stoppage of the outlet, his house would have been inundated by the excreta from his own and his neighbours' houses. By dint of great trouble and perseverance I obtained, at a considerable expense, a new sewer and a connection with the main sewer, and effectually severed the house from any communication with the adjoining properties.

At Lancaster Gate, the inmates of one of the houses built by an eminent contractor, were terribly inconvenienced by sewer effluvia. The owner was almost rude when the drainage was inspected, and it was with great reluctance that he permitted an examination. The diagram (fig. 3) shows the defect discovered. The main drain was carried right under the basement passage, and was constructed as a square chamber; the paving stones form the covering thereof, and whilst the cement joints were perfect no harm arose; but in time these dropped out, and admitted the impure air of this elongated cesspool to pour into and penetrate the house. The consequences might have been deplorable; the cost of rectification was considerable. The owner positively asserted

that it was impossible that there could be anything wrong with the drains. We found what I have described.

A house in Porchester Terrace was let and unlet for a lengthened period, few of the inmates remaining longer than one year. I surveyed it, and found the woman in charge and her child looking pale and wan; she said she had never been well since she had been in occupation. Upon investigating the matter, I found that the rain-water pipe, which was carried up the front elevation, and in immediate contiguity with the windows, was the main conduit or ventilator of the whole of the sewers of the district, for close by was the dead-head, or wall, of the system.

In Gloucester Place, the interior of a corner house having a large flank wall became unbearable, although the owner had expended a considerable sum in sanitary improvements; I found the brickwork built (to save money at the expense of stability) in pockets, the conduits, thus formed, admitting the impure ground air issuing from the saturated soil to percolate into every room in the house, the effluvia being more apparent in the upper chambers than the lower, adding considerably to the difficulties and perplexities of the investigation.

In Essex Street, in the Strand, two firms of solicitors had come so nearly to quarrelling as to threaten an expensive and protracted litigation. Both parties had put their houses in order at a great expense. Nevertheless, on the first floor of one of the offices, occupied by the senior partner of the adjoining house, an unmistakeable smell of sewer air was intermittently but pungently perceptible. Investigating the subject, I ascertained from the builder of the firm who complained, that he had, irrespective of putting the drainage in order, hacked off from all party walls the plastering, and had substituted Portland cement, but had failed to take the skirtings down or to plaster between the floors and joists. Clearly, then, here was a clue to the

mystery. On proceeding to the adjoining building, I found on the first-floor level a w.c. (fig. 4) thus constructed, with soil-pipe connected directly with the sewer, a safe under the same, with overflow to the outer air, and pan closet with a D trap, as shown in the diagram. On applying a candle, the flame blew directly across the trap, in which was found a small orifice which readily admitted sewer air and blew it between the joists, which formed perfect conduits or pipes, and conducted it through the interstices of the brickwork of the old party walls, and so into the adjoining premises. Upon properly altering the arrangements, the evil was rectified, the lawsuit was abandoned, and peace was restored.

A good type of want of Sanitation is shown in the house I have before mentioned, and is besides a very usual one, the points of which every practical sanitary architect will at once recognize.

Here we have a new house (fig. 5) in direct communication with a sewer which, by its gradient and construction, becomes at times filled with sewage water discharging itself into the house; with drain pipes, improperly jointed and leaking into the soil, carried under the house; with soil and waste pipes connected directly with the sewer—in fact, the impure air laid on to the interior with more care than the gas from the main; with bath room and w.c. in proximity and on the bedroom floor; with a sink placed in the centre of the house and so positioned that all foul air finds its way into the surrounding bed chambers, and with hot-water cistern (fig. 6) so located as to prevent its egress, but, on the contrary, to ensure its delivery into the interior; with drinking-water supplied from a cistern situated under the eaves of roof, and with waste pipe therefrom carefully connected with D trap of w.c. My client put, some years ago, a sink in the centre of the house for the purpose of drawing water, with a hot-water cistern over it, immediately connected with the D trap of the w.c., and the waste from the cistern was

also connected with it, and that from the bath, and they all went down the soil-pipe of the w.c. The heat occasioned by this hot-water cistern drew up all the impurities into the house—a very common arrangement, I fear.

The methods adopted to rectify these evils are shown by the accompanying diagram (Fig. 7) and illustrate the suggestions herein made. The sewer is shut by a back flap-valve; the house is separated by a syphon trap, placed near a manhole so as to be easy of examination and access; the drains are all laid externally to the house, and all ventilated, so as to ensure the passage of currents of air up or down them; these disconnected from the closets, &c., by means of the "Pott's Trap," itself ventilated and open to the atmosphere.

Closets, with soil pipes, apparatus, and seats ventilated and surrounded with air; sinks, lavatories, bath, and wastes discharging into the open air; the whole system flushed out by "Field's" syphon. Add to these precautions, the concreting over the basement, putting tongued boarding, and removing all surrounding earth, and the house is rendered a fit place to live instead of to die in.

It may be well to mention that, to overcome the difficulty attending the disposal of the house drainage in the event of future stoppage of the sewer outlet, I constructed a dry well, attaching thereto a jack pump, so that the same can be pumped into the street when necessary.

I narrate an instance where, for some years, the inmates had been drinking their own despumation (Fig. 8):—

The syphon at the bottom became gradually silted up, and the fouled water found its way through the trumpet-mouthed waste into the water used for potable purposes.

In many of the old houses in the best parts of London and the provinces are still to be found basements riddled with cesspools. A Member of our Institution had three removed from his house in Harley Street. In the same street a Prime Minister lived forty years without any connection between

his house and the sewer, and it was only when typhoid fever set in that the defect was rectified.

In Portland Place, in one house, thirteen cesspools were discovered. Mr. Rawlinson removed fifty-three from Windsor Castle.

I have had cases in my experience where not even cesspools were constructed, but where the soil was simply delivered into and upon the surface, and so deposited for some years. Examples could be readily multiplied, but *cui bono?* It will puzzle curious enquirers, in future generations, to understand how any could have been suffered to exist; though it will not occasion them surprise, nor tax their understandings to realize how they produced such terrible but natural effects. The diseases occasioned thereby will disappear, and their existence will vanish in the time to come, and will be mere matters of historical interest.

It may be objected that the works suggested are of a costly character. I have approximately calculated the additional expenditure which would be required in the construction of a London house of usual character, of, say, 25 feet frontage, 60 feet deep, and containing 5 floors, giving a total height of, say, 60 feet. At liberal prices, the work would not entail an original outlay exceeding £60. To alter such a house would cost £150 at the least. Allowing the builder £10 per cent. on his outlay, it would demand only £6 per annum to be added to the rent, a small sum when compared with the immunity from danger to life and health which it would secure. From actual and recent experience, I am able to state that any ordinary size house, say, of a rental of about £100 to £200 per annum, can be altered so as to be converted from an insanitary to a sanitary condition for a sum not exceeding £300. This statement must, of course, be qualified to this extent, viz., that no extraordinary difficulties present themselves; but I, unhesitatingly, assert that in every case the expenditure need not be excessive;

that in most instances it will be but moderate, and that under all circumstances such expenditure will pay itself in a few years by the saving in doctor's bills, the preservation of furniture, &c., and the cheerfulness and happiness which it must and will procure.

The practice of the profession is to value property upon the principle that "a thing is worth just what it will bring," not what it is intrinsically worth. Owing to a lamentable want, not only of sanitary knowledge—but likewise of sanitary legislation, the general public are ignorant of the commercial loss which their neglect entails. Little inducement is held out to the builder to expend money in sanitary work, when he feels that it would not be pecuniarily or socially estimated. We too often find that where sanitary improvements both in material, workmanship, and invention have been employed by a contractor in his buildings, they have not realized a £1 more either in rental or sale when brought into the market. A Queen Anne elevation, some tawdry so-called decoration, or an extra cupboard have been far more productive of profit and far better estimated both by public and by valuer. Yet, as I have shown, Sanitation forms a real and large increment of value, and should be estimated and provided for in renting or purchasing a house or estate, just in the same way that its repairs and other outgoings are considered.

The valuer can readily estimate the increased advantages and benefits of Sanitation at a money value; the enjoyment derived, and the anxiety spared from ill-health, is not so easy to calculate—it is without a tangible price. The disadvantages and evils attending a want of sanitary precaution can, with equal facility, be measured in pecuniary value; not so the trouble engendered, the oftentimes ruinous expense entailed, and the loss perhaps of some dear life, plunging a household from affluence into comparative poverty, if not absolute pauperism, thus—

The typical illustration I have drawn was taken by a client, a shrewd and clever lawyer, who was induced to accept on lease for 7, 14, or 21 years, a new house situated in a good neighbourhood, well planned, with ample accommodation, and built by and under the supervision of an architect. It was one of a large number still unlet, and he yielded to the temptation of obtaining it for some £30 or £40 less rental than it was really worth. The first 7 years passed happily away, but just as he had entered into the 8th year the basement of the house became flooded with sewage-water, standing to a depth of over 12 inches. His wife and children became affected with diphtheria, and his own health suffered. His medical attendant ordered him and his family to leave the house, and he was obliged to send them to Eastbourne for a lengthened period at a large expense. I was called in to remedy the mischief, and my client, by my advice, saw the architect and landlord, who enlarged on the doctrine of "*caveat emptor*," remarked on the low rental obtained, and finally refused any assistance. Irrespective of the anxiety entailed—quite beyond estimation—the trouble involved, loss of business and peace of mind, the absolute cost has not been less than some £500. Now, add this to his rent of, say, £140 per annum, on a £6 per cent. table for 14 years, and it will amount to at least £50 per annum (without calculating cost of repairs, &c.), or, in other words, he will be paying some £25 per annum more than he would have paid had he given the original rent demanded of him, and had he taken the precaution of ascertaining the sanitary condition before accepting the lease.

For the *present*, we do not require further legislation. In the *future*, it must proceed from an educated conviction, founded on its absolute necessity. To this Institution I look, with hope, to promote and to ensure such an education—by appealing, it is true, to the lower but unerring instinct of the pocket—to point out the cost incurred by neglect; to

call attention to the necessity for compulsory sanitary measures, which, if disregarded, involve penalties and serious outlays—even, in some instances, forfeiture of property itself; to bring to recollection the regulations of Water Companies, demanding special fittings and provisions for constant supply; to building enactments, compelling sanitary construction; to Nuisance Removal and Public Health Acts; and to the various bye-laws authorized by Secretaries of State, and now being actively promulgated and enforced throughout the length and breadth of the land.

All these enactments are to be measured by money value, and will be found, perhaps, the best method of instructing the people. Their worth once recognized pecuniarily, they will not be slow to appreciate their sanitary value, evinced as it will be by increased longevity, amelioration of physical condition, disappearance of disease, a lower sickness-rate, the banishment of much crime, drunkenness, and misery, a diminished death and a reduced poor rate.

To this Institution is entrusted the task of teaching the people that, if property has its benefits, it has likewise its obligations, and that, morally and legally, there is full vitality in the grand old legal maxim—

"Sic utere tuo ut alienum non lædas."—

"That people must make use of their own property in "such a manner as not to injure that of others."

Mr. W. Eve (Member) had great pleasure in moving a vote of thanks to Mr. Collins for his excellent Paper. The subject was of the first importance, inasmuch as it concerned man's most valuable possession—good health. Probably a principal reason for the public neglect of Sanitation was fear of expense, and he was afraid that the estimates put forward by Mr. Collins would tend to increase rather than allay this feeling.

The best way to deal with this question was to bring

extreme pressure to bear on builders, and there was no better way of doing this than through the Local Authorities. The construction of drains was generally most defective, and, considering the evil effects which resulted, the public indifference was remarkable. He was himself an advocate of combined drainage as distinguished from separate drainage to each house, since great inconvenience constantly arose from drains passing through the house. Unfortunately, many districts in the Metropolis refused to sanction the combined system, requiring a separate drain to each house, the consequence being that, when the houses were built in terraces, a drain had to be carried through each basement floor, a practice which carried its own condemnation. In districts outside the Metropolitan area, back drainage was sometimes permitted. He was himself laying out an estate of 400 houses on this system, and the drains passed through four houses only—a very great advantage, from a sanitary point of view. In some districts of the Metropolis the authorities allowed five houses to be drained into the sewer with one connection, thus reducing the evil to one-fifth of its proportions under ordinary circumstances—at any rate, four of the houses were spared the inconvenience and nuisance of a drain under the basement.

He thought that the best course to take was to urge the districts to supervise with great care the laying of the drains in new houses.

There was no greater source of illness than the non-discharge of sinks into the open air. In one of the diagrams Mr. Collins had illustrated the too frequent practice, or rather the almost universal practice, of discharging the sink into a drain which entered the house; that, he thought, should never occur.

He could strongly recommend the self-acting flushing chamber (fig. 1). It was his practice to let some rain-water discharge into it, and he found it an excellent plan.

As Mr. Collins had pointed out, the great essential of all those contrivances was to make them as nearly self-acting as possible.

The old pan-closets had been condemned by Mr. Collins, as by everybody else who knew anything about them. It was astonishing that such a number of them were still sold, and, considering they were somewhat expensive, he often wondered that speculative builders, who studied economy above everything, selected them. Pan closets were merely receptacles for accumulating bad air, which, when the handle was pulled, discharged itself into the face of the user. He thought the Institution was greatly indebted to Mr. Collins for his Paper.

The President pointed out that one of the chief objects of the Paper was to show the increased value to property resulting from more perfect sanitary arrangements. He hoped this would not be lost sight of in the desire to discuss the merits of particular inventions.

Mr. W. Sturge (Past-President) had great pleasure in seconding the vote of thanks to Mr. Collins for his most interesting and instructive Paper, prepared with great care, as was evinced not only by the Paper itself, but by the numerous diagrams exhibited, and which he hoped would be used not only for the information of those present, but for the instruction of all who had to build houses and to live in them.

Bearing in mind the great increase in the population of towns, the vast importance of these sanitary arrangements was at once apparent, for, as Mr. Collins had observed in the early part of his Paper, it might be laid down as a principle that the thicker the population the shorter was its life, and the worse its health.

Since hearing the Paper he had been looking back

a little to ancient times, and without going so far as the days of Methuselah (although it would be interesting to know under what sanitary arrangements he and his fathers before the Flood lived to such enormous ages), yet, going back no further than the time of the Patriarchs, it would be remembered that Abraham, Isaac, and Jacob lived to the age of 150 or 180. Jacob, he thought, lived to be 147, and he said "few and evil had his years been, in comparison with those of his fathers." Whether that was in consequence of his removal from the healthy uplands of Canaan to the plains of Egypt, he could not say; but the duration of human life seemed to have gradually declined for many generations, for Moses lived 120 years, and Joshua about the same time, but David declared that three score years and ten was the natural age of man. That state of things seemed to have gone on pretty much from the time of David until nearly the present time, but of late years there had appeared to be a tendency to longer life, and also to improved health for a longer period than was the case some fifty or a hundred years ago.

He was very much struck by the table which appeared on the first page of Mr. Collins' Paper, giving the death-rate per thousand at different periods. The death-rate from 1660 to 1669 was put at eighty per thousand. That seemed a most enormous percentage, but he supposed there was authority for it. It was probably explained by the frequent visitations of the Plague in the 17th century. From 1681 to 1690, there was a decrease to 42 per thousand; from 1746 to 1755, to 35 per thousand; from 1846 to 1855, to 24 per thousand; and from 1871 to 1880, to 23 per thousand. In some of the most healthy places he believed the rate was reduced to considerably less—to something like 16 or 18 per thousand. He fancied he recollected reading a Paper by Dr. Richardson, wherein he stated that if sanitary arrangements were duly attended

to, and if people lived as they ought to live, in moderation and temperance, he did not see why the rate should not be reduced to 9 or 10 per thousand.

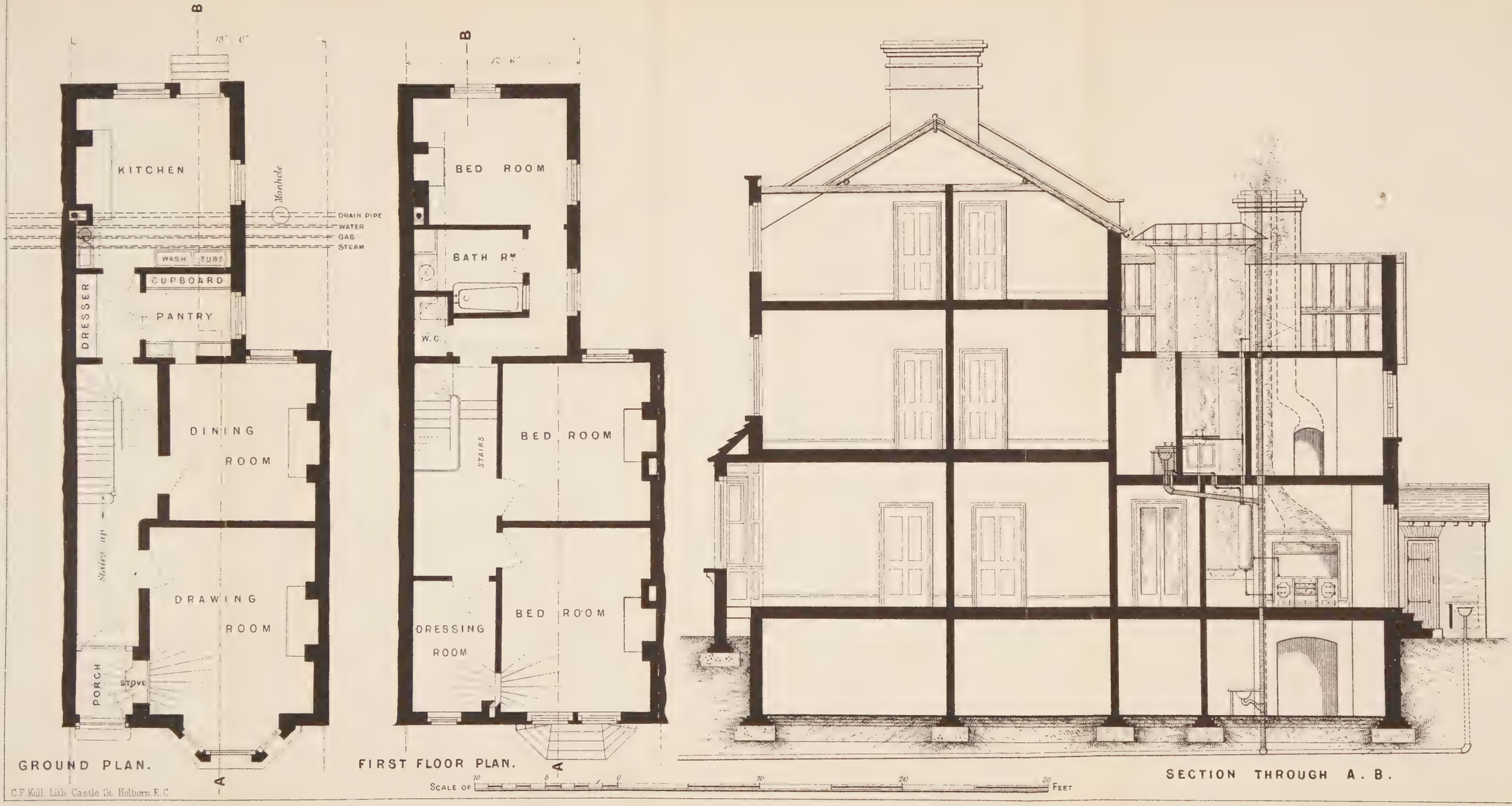
He had no doubt that a vast amount of ill-health was attributable to those noxious gases—those silent messengers of death—which were found in houses not only in large cities, but in country places, and which appeared to carry off people without any apparent cause.

He was afraid that bad air and bad water killed as many people as war. He had very great pleasure in seconding the vote of thanks to Mr. Collins for calling attention to the subject by means of his most interesting and instructive Paper.

Mr. R. W. Mann (Member) observed that Mr. Collins had spoken of the necessity of placing cisterns in a good light. He wished to know whether this was merely for convenience in getting at the cistern, or because the water required light? Water, of course, kept very sweet in the ground without light, and he was not aware that it was necessary for keeping it pure and wholesome.

Mr. W. H. Warner (Member) suggested the desirability of inviting many of the gentlemen who had made drainage their special study to attend the next Meeting, and give them their experience.

The vote of thanks to Mr. Collins having been put and carried unanimously, the adjournment of the discussion to the next Meeting was moved by Mr. William White, F.S.A., and agreed to.



C.F. Kell. Lith Castle St. Holborn E.C

AT

THE ORDINARY GENERAL MEETING,

Held on Monday, March 21st, 1880.

THE PRESIDENT IN THE CHAIR.

The discussion on the Paper, read by Mr. H. H. Collins at the last Meeting, entitled "Sanitation, as an Increment of Value in House-Property," was resumed by—

Mr. William White, F.S.A. (Visitor), who said that, in the few remarks which he proposed to make, he should confine himself as strictly as possible to the real subject of the Paper—viz., the increase in the value of house-property resulting from proper Sanitation. He was sorry to think that very little increase of the kind had been secured by anything yet done in this direction. From all he could gather, the great mass of the people had not yet been brought to see the absolute necessity for Sanitation, and this seemed especially the case with regard to the very large amount of property put up by small speculative builders, whose sole desire was to make the most of every penny they spent; and if was scarcely reasonable to suppose, unless some external influence were brought to bear upon them, that these men would be more careful in these matters than in others which had necessitated special legislation. It might be contended that the refusal of tenants to take the houses so constructed would be sufficient to make the builders mend their ways, but practically it was found that whenever houses were put up—providing they were in anything like a good situation, and had a respectable elevation—people would take and occupy

them almost before they were completed, without asking a single question as to their sanitary state. That had been evidenced by the way in which bad foundations and bad soils had been built upon in known unwholesome localities. Equal indifference characterised the classes of society which centred round the professions, with the exception of those immediately influenced by the profession supposed to be personally interested in the present agitation. He had been frequently engaged in negotiations for houses, and had rarely heard any questions asked about their sanitary condition—in fact, he knew of a house taken last week, at a rental of nearly £200 a year, without any such question being asked.

As the author had pointed out, there could be no question whatever that the intrinsic value of a house was vastly increased by proper sanitary conditions, but that did not necessarily influence its commercial value in the view of the public, and it would probably be some years before any real substantial advance would be made in that direction. It took a long while to introduce anything in the nature of a practical reform, as was proved in the case of the Adulteration Acts. Immense good was effected in a very short time by the operation of those Acts, but no pressure previously brought to bear upon the tradesman was sufficient to induce him to enquire into the purity of the articles he sold, or persuade the purchaser to satisfy himself as to the wholesomeness of the articles which he bought. How, then, was a knowledge of the pecuniary value of proper Sanitation to be brought home to people? It seemed to him that, as in the case of adulteration of food, legislation alone could do this, but what that legislation was to be was very difficult to decide, for the holders of property, very naturally and properly, resented any undue interference with the rights of property. At the same time it must not be lost sight of

that the tenant was in a far less protected state than the landlord, and was, to a great extent, at his mercy, and went on living in a house unconscious, probably, of its insanitary state.

He knew a case where the tenant of a house appealed in vain to the landlord for a separate cistern for drinking purposes, and for a disconnection of the drains, the want of which rendered several rooms in the house almost unbearable. It was not until the frost of last winter happily brought the state of things to light that the Sanitary Inspector could be put in motion and a remedy provided by the action of the District Surveyor and the Metropolitan Board of Works. He was not quite sure that the existing machinery of the Metropolitan Board of Works would not be ample, if somewhat extended; but there was no question whatever that a very great deal would still have to be done by voluntary organization, by discussion, and by the action of societies such as this and the new Sanitary Assurance Association.

Any new legislation should insist as first essentials upon the shutting out of bad air and bad water from dwellings.

He thought a tenant ought to be able to demand from his landlord some sort of certificate that certain things had been properly carried out, such as the disconnection of drains from the sewers and a separate water supply for drinking purposes. Landlords would very quickly apprehend their duties in this respect if an Act of a few words were passed declaring that an action for the recovery of rent should not lie unless they were able to produce some sort of proof that the sanitary conditions were, at least, such as to exclude what people had come now to recognize as an absolutely unwholesome state of things.

Mr. L. W. Leeds (Visitor) said that it was very gratifying indeed to him to find so much earnest thought and hard labour bestowed upon sanitary matters in this country; and he considered it a great privilege to have the opportunity of attending Meetings such as this and listening to so many useful and practical suggestions.

Within the last few years there has been much interest awakened in sanitary matters in America, and it was to be hoped that the keen appreciation of the value of that mighty dollar with which they were so frequently accredited might spur them on to active co-operation with this country in this great movement.

The Americans appeared to be gaining credit throughout the older countries for considerable ingenuity in making new inventions and adopting new devices for carrying out their ideas; and, if they once became fully interested in sanitary reform, much valuable assistance might be expected from them. There was probably no nation that appreciated more fully the value of experience. They were watching with great attention the vast works for the sanitary improvement of London, and were following with interest all the details of sanitary science. London was the largest city now existing. Its inhabitants required to be supplied daily with their food and drink, and, what was more directly connected with the subject under discussion, to have all the refuse from this vast and rapidly-increasing multitude entirely removed from amongst them without causing nuisance or inconvenience to health. He quite agreed with Mr. Collins in believing that the popular but vague theory—"that the nearer people live to each other the shorter their lives," was not necessarily true. He believed that it would be quite within the reach of possibilities to make the sanitary arrangements so perfect that the inhabitants on any given acre in the most crowded district of London might be as healthfully housed as in any

sparsely-settled portion of the country. A large portion of New York was more densely crowded than any part of London, but the sanitary arrangements were not such as to be proud of. The rapid gathering and crowding together of people from all parts of the country and from every nation of the globe—each one simply looking out for his own interest, and paying but little attention to his neighbour's—produced, as can readily be imagined, a very unsatisfactory condition of things. But the evils resulting from the want of general co-operation, and a system of correct, comprehensive sanitary regulations and laws, became so unbearable that a great outcry had been raised within the last few years, and vigorous efforts at reform were now being made, and were already producing excellent results.

The duty of the public Sanitarian was to provide healthful dwellings for the industrial classes, and those of moderate means, at the smallest possible cost. The very wealthy could take care of themselves, or could afford to employ a good sanitary engineer to care for them.

It became, therefore, a matter of much importance as to how many persons could be safely housed on a single acre of ground, and still preserve all the sanitary conditions of perfect health.

With careless habits and ignorance of correct sanitary laws, a single family, on an acre of ground in the country, might soon accumulate sufficient filth around the house and in the cellar, to make that single house, on the one acre, a very unhealthy habitation. There were some important advantages to be gained, in a sanitary point of view, by the free distribution of the population. But it was quite worthy the careful study of the Sanitarian to see whether thoroughly healthy homes could not be secured for the industrial classes, by placing large numbers on a given area, with carefully-studied and perfectly-executed sanitary arrange-

ments, rather than by distributing the same number of persons over a much larger area, when less expense could be afforded for the public sanitary arrangements. Perhaps the density of population might be safely limited to the ability to provide rooms into which the direct rays of the sun might come at least once in every 24 hours. The sun's rays were the great purifying and disinfecting power, and where they could be secured all other sanitary requirements might be added; but the moment they were omitted it was treading on dangerous ground.

The several practical illustrations, given by Mr. Collins, of the imperfect and frequently dangerous sanitary arrangements so often met with, were very interesting; and the continued publication of facts like these, with such admirable suggestions for remedying them, must result in the education of the public, which will form the substantial foundation for a thorough and lasting sanitary reform.

In speaking of planning, Mr. Collins seemed to favour the general principle of placing the sinks, w.c.'s, and all such places from which dangerous gases were liable to escape, near the outside walls. For several years past he (Mr. Leeds) had been urging a different principle of planning. Of course the primary object was to avoid all possibility of the escape of dangerous gases into the house; but the general and natural movement of the air in the house must be carefully studied. In an ordinary dwelling of moderate dimensions, the kitchen fire was the most constant and frequently the controlling power for the circulation of the air throughout the whole building. The demands of the kitchen fire for fresh air must be supplied, if not in other ways, by drawing it from sinks, the w.c.'s, or down some vacant chimney flue. Now, the reason for placing the sinks, w.c., &c., next the external walls, was to secure direct communication with the external air by open windows.

But did not every-day experience fully show that, by opening an external window into a water-closet, the current was much more frequently into the house than out of it? It was simply supplying the fresh air to the house through the water closet and over the sink.

In winter, and during much of the summer, the fresh air entered at all the external windows and doors, rising through the open stairway, and escaping through the fireplaces or from the top of the hall. Would it not seem much more natural, therefore, to place those objectionable conveniences in the exhaust shaft, so to speak, rather than in the fresh air channels? A constant exhaust from these places should be secured, whenever possible; but an external window should never be allowed to be opened into them. Such windows should be screwed fast.

As to the ventilation of the soil-pipes, Mr. Collins coincided with what appeared to be the prevailing opinion of the most active Sanitarians in the country, in insisting on a complete disconnection between the street sewer and the drains in the house. It was undoubtedly true that the want of this complete disconnection frequently allowed of the return of the poisonous gases from the sewer, which escaped into the house, to the great disadvantage of the occupants. But the point he did not feel quite satisfied with as being entirely perfect was the liability of the escape from this open trap of a portion of the gases which might be formed on the premises; and, in a crowded neighbourhood, these escapes must necessarily be near the entrances of the fresh air to the houses. Great care should be used in allowing any escape from the sewers at or near the ground level. Mr. Collins provided for the removal of that air to the top of the house by a ventilating pipe, which should be surmounted by a ventilating cowl, but said, that this pipe

should be on the exterior of the house. Now, it was well known that this pipe with the ventilator on the top would act as a suction-pipe, and do all that was required for a large portion of the year; but there were conditions of the atmosphere in which there would be no upward current, and at such times there would be a liability of the escape of some of the sewer gas at the ground level. Now, if some power could be applied to this ventilating pipe that would ensure a constant upward current, and he thought that quite possible, a point of great value would be gained. Mr. Collins alluded to carrying the impure air and products of combustion through special flues, built next the kitchen flue. This was a valuable suggestion. Now the kitchen fire was the one constant power in the dwelling which seemed particularly applicable to the ventilation of the house, and the waste heat from an ordinary kitchen was sufficient, if properly applied, to thoroughly ventilate the whole building, soil-pipes and all.

A rough drawing, giving some suggestions of one way in which these general principles might be applied was presented.* For this illustration, he had chosen a somewhat stereotyped plan of a house being built in great numbers around the suburbs of London, and which, was very similar to the typical house of Philadelphia—such as were being built by the mile at wonderfully cheap rates—and which were perfect marvels of convenience and comfort for families in moderate circumstances. He believed it was now admitted, by the most careful students of sanitary science, that the Philadelphians were the best-housed people in the world.

He was much pleased to hear the favourable opinions expressed upon what was termed back drainage, or combined drainage, as distinguished from separate house drainage. There were many cases, of course, where this system

* This drawing will be found opposite page 273.

could not be used; but, where it was possible, it certainly had very great advantages in simplicity, economy, and the most perfect security against the accumulation of sewer gas on the premises, or its escape into the house. It saved two-thirds of the amount of soil-pipe upon each private property. Assuming it possible to adopt this system of drainage, and by carrying the gas and water pipes in the same way, it was possible to secure all the advantages of an ample supply of hot and cold water and perfect drainage, with complete ventilation, in a very simple and inexpensive manner.

By reference to the sketch, it might be seen that the sink in the kitchen was placed in the inside and warmest corner of the room, at the point where the hottest and foulest air would accumulate, and from whence it would escape if the proper facilities were provided for that purpose. This was done by a large ventilating shaft opening from the ceiling, which answered a double purpose. First, abundantly lighting this sink, which would be otherwise dark; and, secondly, giving the most abundant ventilation to the kitchen, which would most effectually prevent any smells from it getting into any other part of the house. The water-closet on the first storey was also placed against the inside wall, amply lighted by an extension of the skylight, which also lighted the bath-room and washstand; but the important feature was the treatment of the soil-pipe. This extended perfectly straight from the small sewer to the top of the chimney. It was enlarged from where the soil-pipe of the w.c. entered, to the top of the chimney. This upper part was enclosed in the kitchen flue, and was thus kept warm, ensuring that constant draught outwards so desirable.

In a row of houses—say, ten or twenty—there might be times when some of the fires would not be lighted; but if one-half, or even one-fourth, of them were in use, it would be quite sufficient to keep the main sewer perfectly

ventilated, and prevent any of the air passing back into the houses. With such an arrangement, it would be quite safe to do without any of D traps referred to by previous speakers.

With one of the Yankee hot-water boilers about which there had been so much discussion, and which were certainly very handy things to have in the house, it would be a very simple matter to have plenty of hot water always ready to draw in the sink, in the kitchen, into the washing-tray in the butler's pantry; also in the bath-room and the washstand on the first floor. All this could be secured at a very small cost, and would be so simple that it would be almost an insult to suggest it to any first-class London plumber.

After the frost last winter, he had asked the plumber that came frequently to mend some newly-developed burst in the pipes, why they did not place the pipes where they would not freeze so easily? His reply was, "What should we do for business in winter if we did that?" It could readily be seen what an unsatisfactory arrangement for the plumber, in that respect, this would be. This principle had been applied to many of the large public institutions in the United States—generally with satisfactory results.

Mr. T. Chatfeild Clarke (Member) thought that the thanks of the Meeting were due to Mr. Leeds, for it must be admitted that, though the principle of suction by means of air shafts, and the action of heat as explained by him, was by no means new, his use of it was to some extent novel. Since the unfortunate illness of the Prince of Wales, sanitary science, as it was called, had formed the subject of great, he might almost say of sensational, discussion, and when one heard of sanitary doctors and sanitary associations on all sides, there seemed to him some danger of

a great deal of wild talk about a matter which had been dealt with by practical architects with great care for many years. Even during the last few months a good deal had been said and written which did not strike an architect of experience as embodying any feature of novelty. He thought it right to say this in justice not only to architects, but to the author of the Paper, which, good as it was—and he thought that Mr. Collins would confirm him—contained very little in the way of fresh suggestion or which any practising architect did not know and ought to have acted on. He protested, therefore, against persons coming forward professing philanthropy and endeavouring to put guineas into their pockets by the practice of what was called sanitary science. Matters of the kind should be dealt with in one way or the other—either as business or as philanthropy.

He looked with some suspicion upon quási philanthropic associations which took payment for their services. No man present would attempt to disparage an association the aim of which was the good of society, but there was no novelty in this particular matter. Nothing was required but care and common sense, and adaptation to varying circumstances without ostentation and in the regular daily practice of the profession. The gentleman who had last spoken had referred to the practice in this country of putting water closets next the outer walls. The object of doing so was to avoid carrying the drains across the house, which was considered a very important point by most architects. It was also usual to have a second door to the water closet and a lobby between, so as to obviate the possibility of drawing bad smells into the house by cutting off the air. The great effort had lately been to keep the drainage outside the house, but if the sinks, &c., were put against the internal walls, as suggested by Mr. Leeds, he did not see how to avoid crossing underneath the floors with the drains. He

trusted that this question, so interesting and valuable to society at large, would not be made a subject for clap-trap discussion, but be treated as falling within the lines of an architect's daily practice, and not as the property of specialists.

Mr. Rogers Field (Visitor) had read the Paper with great interest. He thought it a very valuable contribution to the subject, containing as it did many suggestions likely to advance Sanitation.

It was no doubt to a certain extent true, as Mr. White had said, that people did not enquire much about the sanitary condition of a house before taking it, but it was becoming a very usual practice before taking houses in London to have them examined by a sanitary engineer or architect, who gives a certificate that the drainage is in good order. Unfortunately, the examination was often of a very unsatisfactory character. Clients of his had frequently assured him, "Oh, before we took the house, we had it examined by an Architect or Surveyor, and we told him to see about the drainage. We have his report that the condition of the building is good, and that the drainage is all right." Well, the fact was that it was impossible to judge of the drainage of a house from a casual inspection. If Architects and Surveyors made it a practice to refuse to give an opinion about a house unless allowed to thoroughly open up and examine the drains, the results would be salutary; without this, it was impossible to speak to the real condition of the drains, for, though everything might appear to be in proper condition, such an examination as he had referred to might disclose the fact—frequently enough met with—that the drains were not connected with the sewer at all, the sewage all going into the ground. If Architects and Surveyors refused to say anything about

the drains unless allowed to open them up, their opinions would be much more valuable and more often sought.

He could not agree with Mr. WHITE, that the chief sinner was the speculative builder. Undoubtedly he was a great sinner, but at the same time there was a great deal of building going on where, nominally, no expense was spared, and yet the drainage was as bad as it could be. His friend, Mr. CHATFEILD CLARKE, would perhaps say that this was sensational, but unfortunately it was nothing more than the sober truth. Many things of this kind, stated to be sensational, were sober truth, though disbelieved by the majority of people, or at any rate looked upon as exceptional. He would give a case in illustration.

He had been recently asked by a client—a medical man—to examine a house he was about to take at the West-end. Everything was completed but the signing of the agreement, and his client had been told that the drainage was perfect. He wished, however, to have his (Mr. ROGERS FIELD'S) opinion about it. The house belonged to a person who owned a large amount of property in the neighbourhood, and he was stated to have put everything in good order. It was arranged with the intending purchaser that he (MR. ROGERS FIELD) was to go the next morning and examine the drains, but he received a letter from his client saying, "Do not go, because I hear from the builders that the work is not completed. They are largely altering the drainage, and do not wish you to come until the work is done." He at once replied, saying, "The very reason you state for my not going is the very best reason for my going, becauses the chances are that the things about to be done will be wrong." He went up to the house, and found all the drains pulled to pieces, and the old pan closets and D traps taken out, but these had been carefully stored in the cellar, and were going to be refixed. "How about the

overflows from the cisterns?" he asked. They did not know exactly. "Let me look at them," he said, and he found, of course, that they went into the soil pipe or drain. A new w.c. was being built in the centre of the house, without ventilation to the outer air, and with an unventilated soil-pipe—about as bad a thing as could be. He went to his client, and advised him to insist that this w.c. must be altered, and the drainage done properly. The owners refused to make the necessary alterations, but fortunately his client had not signed the agreement, and refused to complete the purchase. This showed the immense advantage of an examination before taking a house, by opening up the drains and, if necessary, reconstructing them. It also showed that the speculative builder was not the only person who built houses of an insanitary kind.

The sanitary element in the value of houses could only be satisfactorily estimated on fixed principles. There must be established and acknowledged rules as to sanitary arrangements. Architects and Surveyors would then know what they were about. The establishment of fixed principles would also be valuable, when examining a house, in inducing a builder to remedy defects. One of the first things a builder said when asked to alter some defect, such as the connection of the waste pipe with the soil pipe, was, "Oh, there is a difference of opinion about that." Now there were points, such as this, about which there should be no difference of opinion, and these points ought to be formulated as a standard for reference. Some five years ago, when he was advising the Sanitary Board of Uppingham, after the serious outbreak of fever in the school, he strongly recommended them to have bye-laws and regulations drawn up embodying the most important points with reference to the drainage of houses—points respecting which all the best authorities were agreed. They acted on his advice.

Bye-laws and regulations were drawn up by him, adopted by the Sanitary Board, and afterwards approved by the Local Government Board in London.

The Local Government Board itself subsequently drew up a series of model bye-laws embodying all the best modern sanitary practice, and the Board now insisted on these being adopted by Sanitary Authorities whenever they wished to make new bye-laws, so that these model bye-laws were gradually becoming the law of the land. Unfortunately, London was excluded from the Public Health Act, and the model bye-laws did not apply to the Metropolis. He might mention three or four of the principal requirements of these bye-laws. They stipulated that there should be no drains under the building, if it could be avoided; and, if there were drains, that they should be laid in straight lines, and made perfectly water-tight. They also stipulated that houses should be cut off from the sewer. Nothing was more important than this. Why should a man ventilate the public sewer through his house? If there were any truth in what medical men asserted, typhoid fever and diseases of that kind came from previous cases; and why were people to run the risk of such infection by passing sewer air through their dwellings, when it could be avoided? The regulations of the Local Government Board also required that the w.c. should be at the outer wall, and that there should be a separate cistern for it. A great many persons objected to this on the ground of expense; but there was very little in the objection. All that was wanted was a separation—it did not matter how small the cistern was, a waste-preventing cistern was sufficient.

The model bye-laws also forbade the use of pan closets and D traps. This was a most important point. The greatest mischiefs arose from pan closets and D traps, and yet those closets and traps were at this very time being

put in by hundreds and thousands in London in defiance of sense and reason. Anyone who took the trouble to examine a D trap would invariably find it coated with filth inside. Why should these beastly things be put in? There were perfectly sanitary closets which were actually cheaper than pan closets and D traps; therefore there was no excuse for persisting in using them in new houses.

The waste pipes of sinks, baths, &c., and overflows of cisterns should be disconnected from the drain by discharging with open ends outside the house. These and other points were set forth in the Local Government Board's model bye-laws. It would be an immense advantage to the Architect and Surveyor to be able to say to an owner, not merely, "This is wrong," but "It is forbidden," or, "It is not in accordance with the bye-laws of the Local Government Board." It would give him a standpoint, which he did not now possess.

One heard a good deal about the large outlay required to put a badly-constructed house into good sanitary condition, and though he did not think it was quite so large as it was sometimes stated to be, still no doubt it was a large outlay. This was, however, occasioned not by the costliness of the drainage, but by the necessity of pulling everything to pieces. As Mr. Collins had said, the additional cost of carrying out good drainage, when the house was building, was exceedingly small, and that was a very important point to bear in mind. He had been endeavouring for a long while past to ascertain accurately what the difference would be, in the first instance, between draining a house properly and draining it as it was ordinarily done by builders, and he had the opportunity not long ago, which he took advantage of. He proposed to give the Institution the details for publication. It was a typical case, that of a semi-detached villa in Hampstead of the value of from

£900 to £1,000; a class of house now being very largely built. In this instance he was called in to advise a client of his who was going to purchase the house. All the arrangements were made, but the house was not quite completed, and he asked his client to allow him to look at it before anything was done, and let him know what the builder was going to do, and he would specify what ought to be done, and let the architect value the additional cost. One side of the statement he handed in, gave the insanitary condition of the house and the main features in the drainage as contemplated by the builder, and the other side gave, item by item, the sanitary condition of the house as carried out in accordance with his (Mr. Rogers Field's) specification. At the bottom the cost was given, and it would be seen that the total additional cost of carrying out the drainage properly was only £18 13*s.* 1*d.* These were actual facts, and showed what could be done, if done in the first instance, whereas to alter the drainage after it was once constructed would have cost from £70 to £80, instead of £18.

Semi-detached Villa at Hampstead, value from £900 *to* £1,000.

In-sanitary Condition. *Main features of original scheme of Drainage as contemplated by Builder.*	Sanitary Condition. *Main features of revised scheme as carried out in accordance with Mr. Rogers Field's Specification.*
Drain directly connected with public sewer.	Drain "disconnected" from public sewer.
Ordinary pipe drains laid in curved lines to suit workmen's convenience.	Watertight drains (Stanford's patent joints) laid in straight lines from point to point and tested before being filled in.
No means of access to drains.	Manhole and inspection shaft for access to drains.
Insufficient ventilation for drains.	A ventilator to disconnecting shaft and the soil pipe continued full size to top of the house for ventilation.
Gully in floor of scullery directly connected with drain under floor.	No drain under house or gully in floor. The floor made to fall towards outlet in outer wall.

In-sanitary Condition.	Sanitary Condition.
Pan closets with D traps supplied from the same cistern which supplies water used for domestic purposes.	Improved Hopper closets and siphon traps with separate flushing cisterns.
Sinks and bath directly connected with drains.	Waste pipes from sinks and bath disconnected, and made to discharge over gullies outside the house.
Bath with very small outlet and waste pipe.	Large outlet and waste to bath, so that it empties itself rapidly and assists in flushing the drains.
Cistern insufficient for storage of water.	Additional cistern for storage of water.
Seats of water closets and casings fixed in the usual way with screws.	Seats of water closets hinged, and casings secured by buttons, so as to take down easily for inspection.

Sum allowed to Builder for additional cost of carrying out drainage, &c., in accordance with revised scheme, instead of as contemplated by him (valued by Architect) . . .	£18 13*s.* 1*d.*
To have altered the drainage after it was once constructed would have cost from	£70 to £80
Shewing an excess in the cost of altering drainage beyond that of carrying it out properly in the first instance of	about £55, or 300 per cent.

Or four times as much as to carry out the drainage properly in the first instance.

Professor Kerr (Visitor) said he had heard many discussions on this well-worn subject, and in the few remarks he had to make would break new ground. Looking at the title of Mr. Collins' Paper, he could not help thinking that what he called the increment of value resulting from sanitary condition was a very important question for the Surveyor, as distinguished from the architect. The expenses involved in carrying out arrangements like those proposed by Mr. Rogers Field, for instance, all over London, was a very serious element in the value of house property, more so, perhaps, than some gentlemen imagined. There were districts in London which were built at a time when house drains were made of bad bricks—when a row of bricks was laid for the bottom of the drain, another row on edge for each side, and another for the top. The consequence was

that after a certain time these drains become stopped up. They were generally laid quite level, or, perhaps, sloping the wrong way, to make the thing complete. When they got partially stopped up, the drainage water soaked through the joints in all directions. Some of them got entirely choked (a great many of them, he was sorry to say), and the whole of the water had to drain through the joints as best it could. The result was that the ground under the houses in considerable districts of London was entirely saturated with water-closet refuse. Occasionally—not very frequently—new and effective drains were put into these houses, but no one would think of taking up the whole of the soil under a house for the depth of two or three feet, and, therefore, the noxious matter remained, and rendered the house unwholesome.

This agitation with reference to sanitary matters was becoming, as he had said, serious. Take, by way of illustration, the case of dangerous structures, that is, houses structurally dangerous. Within comparatively recent years—long after the commencement of long leases now running—the law had practically thrown on the occupying tenant the obligation of rebuilding a house, in part or in whole, if condemned by the authorities; and the procedure adopted was a very good illustration of what was going to happen presently with regard to sanitary matters. The process adopted was this. Some-one wrote an anonymous letter to the Metropolitan Board of Works. Under the statute, the Board was obliged to take notice even of the anonymous letter; and the District Surveyor, being instructed to make a survey, found himself in this position. If he failed to discover any danger in the structure, and an accident happened shortly afterwards, he would be very seriously responsible. His inclination, therefore, was, very naturally, in favour of pronouncing the house to be dangerous. So also with the magistrate, who said, "When a public

officer expresses a positive opinion, and another Surveyor expresses a contrary opinion, do you suppose that I am to undertake the responsibility of keeping the structure up, when a public official says it ought to come down?" The result was that a tenant was very often involved in ruinous expense, and theoretically it came to this—although he should be sorry to say that it came to this practically, though if he heard it had he could not contradict the statement—that the landlord of a house towards the end of a lease could, if he pleased, set a movement going to compel his tenant to hand over the house, at the end of the term, in a condition never contemplated when the tenancy originated. To-morrow, he believed, a deputation was to wait on the Government, to urge on them the propriety of introducing some such system as he had described with reference to the sanitary condition of houses. If anything were done, the probability was that it would take the direction he had indicated; and the gentlemen he was addressing, who were experienced in house-property, would see at a glance that it would be at the expense of the lessee—a very serious matter in many instances.

But that was not all, for, in addition to liabilities of this kind, lessees who listened to the persuasions of many of the sanitary reformers, might find themselves involved in an immediate expenditure of a year's, or even two years', rent. Surveyors ought to proceed in this matter very cautiously, because it only required one of the children to over-eat itself or one of the servants to catch cold, and the doctor who was sent for, went smelling about the house, and said, "You must have some bad drain," or would condemn some trap which he did not understand, and the sanitary engineer would be called in. What would be the position of the Surveyor who had advised the taking a lease of that house, and received a fee, when he got a letter stating that a sanitary engineer had been consulted, and had declared the

house to be in an insanitary condition? This was what matters were coming to, and it behoved Surveyors to take impending circumstances into careful consideration.

Mr. W. H. Warner (Member) said that, although in his very able Paper Mr. Collins declared that drainage was not the Alpha and Omega of Sanitation, it was a question which in the present day largely affected the value and enjoyment of house-property, and, from want of accurate knowledge on the subject, a wide-spread fear existed among owners and occupiers.

As Mr. Collins stated, the great value of the Papers consists in their practical character, and he trusted that some practical result might be obtained from that discussion, such as the formation of a Committee to consider how to apply simply and at small outlay the best and most scientific methods of drainage, and with this view he (Mr. Warner) suggested at the last Meeting that those gentlemen who had made drainage their especial study should be asked to attend and give information. In his experience, as a Member of a firm dealing largely with house-property of all descriptions, he found unfortunate results occur from a want of knowledge of the general principles of drainage. When such property changed hands the purchase was invariably made subject to a report upon the drainage arrangements, which, being seldom in accordance with the special views held by the Sanitary Expert called in, were usually condemned, and the purchase frequently fell through, either on account of the reluctance of a purchaser to occupy a house full of such radical defects as were suggested, or on account of the large outlay necessary to carry out the pet scheme of "the Expert" (it was noticeable that many of these held different views), and he could quote cases in which the outlay had varied from £300 to £1,500. The principles of an improved method of drainage were, in his opinion, applic-

able to nearly all classes of dwellings at small cost. These seemed to be—

1. An interception of the passage of sewer gas from the main sewer to the house drain by means of a trap.

2. The provision for the passage of a current of air through the soil pipe, which should be carried above the roof of the house.

3. Disconnection from the sewer of all rain-water pipes, waste pipes, and overflows from cisterns and baths.

4. The trapping of all closets and all gullies used for carrying overflow or rain water into the drain.

5. The provision of separate cisterns for drinking water and w.c.'s.

There were a great variety of methods of carrying out these principles, more or less of a costly nature, and numerous systems of traps, closets, and flushing arrangements which, although most admirable, were not absolutely necessary except in large public buildings, hospitals, and other institutions involving intricate arrangements. These were luxuries only within the reach of the wealthy. Mr. Collins, in his Paper, quoted a number of Acts dealing with sanitary questions, but he (Mr. Warner) hoped that one result of this discussion would be to induce the Legislature to frame one more Act making it compulsory on all owners of house-property to adopt these principles of drainage, or such others as might be considered advisable. Many local boards now insisted on such principles being applied to all new houses constructed, and he had now in his hands the plans and regulations of the Local Board of Bournemouth, which seemed to be most simple and effective, and which he should be happy to hand to The Secretary for inspection. It was pity the regulations were not made applicable to existing houses as well as to those in course of construction.

As The President pointed out that the chief object of Mr. Collins' Paper was to show the increased value to

property resulting from more perfect sanitary arrangements, he would only say, in conclusion, that in his opinion a more thorough knowledge of the best means of applying scientific knowledge of the principles of house drainage would have a great and material effect on the value of house-property.

It would be a public benefit if some better plan could be adopted for ventilation of the main sewers than the existing method of doing so by openings in the middle of the roads; and possibly some Member present might be able to suggest a remedy, as he was induced to think that the first thing to be done for the safety of the public health was to attend to the proper ventilation of the sewers themselves.

The great extension of sewers for the last few years, which went on increasing, had, in the opinion of many, become a source of danger, and from want of proper precautions to prevent the foul gases passing into the houses had led to many fatal attacks of typhoid and other diseases.

Mr. C. N. Cresswell (Visitor) quite agreed with the remarks of Professor Kerr, as well as with those of Mr. Chatfeild Clarke. He had not read the Paper, but, judging it by the comments made, he thought he saw something to assist him in drawing a few conclusions, and perhaps to point a moral.

The proposition that proper sanitary equipments for making houses fit to live in increased their value, was a somewhat self-evident proposition, and it was hardly necessary in this year of grace to come down to that Institution to demonstrate what might be regarded as an axiom. He had listened to the remarks of Mr. Rogers Field, and could not help thinking that the very rudimentary principles he enunciated had already been laid down so frequently, and, as it were, so ground into our very system, that it was hardly necessary to repeat them. Five years ago these prin-

ciples were adopted by the Society of Arts, and certainly had been recognized by them in the most formal way during the past year. He was himself a member of the sanitary committee of the Society of Arts, and they had had the great advantage in their deliberations of the assistance of Mr. Rogers Field, Mr. A. Eassie, Mr. Griffiths, and many other gentlemen who had given their time to the study of the subject, and to promoting the education of the public in sanitary matters. Those who wished to avail themselves of these accepted axioms had only to ask the Society of Arts for a copy of the pamphlet which he held in his hand, which embodied all the valuable and practical suggestions of gentlemen like Mr. Rogers Field, and had the additional advantage of receiving the approval of a large majority of the delegates from all parts of England. He thought, therefore, that laws of sanitary requirement might be regarded as fixed and definite.

What remained to be done was not only to make the public understand these principles, but induce them to apply them. It had been over and over again declared that it was unwise to legislate in advance of public opinion. When he looked back over his short life-time, he saw that public opinion had been moving so slowly that to wait for it to come up to, and be on a level with, science in modern days, would be to wait until the middle of the next century. It was often said that it was to work at a disadvantage to attempt to move an organism by its tail, and for the people to agitate for further legislation seemed to him very unwise. The only thing to do was to ask the head to lead. It was the business of the Government, he thought, to step in and lay down those principles which had been so clearly enunciated, and, if necessary, enforce them. There was already abundance of legislation—too much of it, in fact. At any rate, it was amply sufficient for all purposes if means could be found of putting it in force. There were clauses in the

Public Health Act which had laid dormant for years; no practical effect had ever been given to them. Mr. Honeyman, of Glasgow, had recently read a most valuable Paper before a local institution, in which he argued against going ahead of public opinion, or directly contrarywise to it, and he thought that an alphabet, as it were, of the structural laws of building, should be constructed. The Land Clauses Consolidation Acts, for instance, enunciated certain governing principles which were always incorporated in private Acts, and it was possible to conceive a general Building Act, the result of careful deliberation, whereby certain regulations would be laid down and established by Act of Parliament, each particular local authority applying, and, if they pleased, amplifying them, but never curtailing them. That was a suggestion which he (Mr. Cresswell) thought worthy of consideration.

He was well aware of the difficulty of combatting public sentiment in these matters. To quote an American expression, "There is a great deal of human nature in mankind." The fact was there was that in the mind of a Briton which made it utterly impossible to drive him. He must be led, or left alone. How was he to be led? The present practice might be unsatisfactory; but he had yet to learn that a man could be compelled to put his hands in his pockets for the purpose of illustrating virtue. If to do so could be made coincident with a man's interests, the most cogent of all forces would be brought into play. Last year, at a conference of the Society of Arts, he made a suggestion, which received the sanction of a large number of persons, and it was the result of years of thought. It was as follows: Could not the owner, or lessee, be induced to put his house in proper sanitary order if given something in the nature of a certificate, signed and sealed by a responsible authority, which could be produced by him at any time, to satisfy enquiries as to the condition of the

house? A certificate of the kind would constitute an assurance of improved value, and would reconcile people to submit to authority. The authority, in the first instance, could be a department of public health in London.

This would be putting into the hands of every owner the means of satisfying the public on a question about which the public thought deeply, and which most materially affected the value of a house. "Is the drainage good?" was, as every house-agent knew, a question which was asked nine times out of ten; but who could answer it? It was all a chance. Suppose the principle were adopted which had existed at Lloyd's for 100 years. From keel to topmast the construction of a vessel was watched and examined, and where the rules were disobeyed, or an attempt was made to evade the conditions, the authorities at once stepped in. Why should not the same thing be done with houses? He would not advocate compulsory legislation at the present moment. He would only go the length of saying that if the owner of a house raised its value by fulfilling certain sanitary conditions, and received a certificate that he had fulfilled them, he would be always sure to find a tenant whenever the house was in the market. Then this result would be achieved, that the owner would have been induced to do a duty which every man owed to himself and his neighbour, to make his house fit to live in, and prevent the possibility of the spread of infection, while making this coincident with the owner's interest; for he would have a better return for his house, and would not be without a tenant or purchaser when he wanted one or the other.

Mr. E. C. Robins moved the adjournment of the discussion to the next Meeting, which was duly seconded and carried.

The Meeting then adjourned.

AT

THE ORDINARY GENERAL MEETING,

Held on Monday, April 4th, 1881.

THE PRESIDENT IN THE CHAIR.

The adjourned discussion on the Paper by Mr. H. H. Collins, entitled "Sanitation as an Increment of Value in House-Property," was resumed by—

Mr. E. C. Robins (Member), who said that it might be in the recollection of some of the Members that in November last he read a Paper, at the Royal Institution of British Architects, "on Sanitary Science in its relation to Civil Architecture," in which he incidentally mentioned that he deemed the subject of House Sanitation, generally, one peculiarly suited to the careful consideration of Members of this Institution, and expressed his regret that, in the list of subjects for examination, no special reference was made to it. He was now glad to find, from Mr. Collins' Paper, that this defect had been remedied.

Since the reading of that Paper there has been, both in London and the provinces, a continuous series of Papers and discussions, professional and otherwise, on sanitary questions. At the Sanitary Institute, in London, and the Philosophical Institute, at Glasgow, Papers had been read by influential men on "Sanitary Legislation." At the Architectural Association, "The Sanitary work of an Architect" had been detailed. At the Society of Arts, under the presidency of Professor Huxley, Professor Jenkin has lectured on the establishment of "Sanitary Protection Societies," on the

model of his Edinburgh experiment. At the London Institution, Professor De Chaumont had treated of "Sanitary Assurance," in a Paper full of valuable information from a medical point of view. A course of lectures had been given at the Parkes' Museum, the committee of which have decided to hold an exhibition of hygienic appliances at the South Kensington Museum during the Medical International Congress in August next. Sanitation had been the subject of an infinite number of addresses, leading articles, and newspaper reports and discussions, so that it might be fairly said to have laid hold of the public mind in a very marked manner. Under these circumstances, it was a fitting thing that this Institution should raise the very practical enquiry—"What is the money value of all this House Sanitation, and to what extent is the selling or letting value of house-property increased thereby?" Thanks were due to Mr. Collins for his praiseworthy attempt to answer this question, but while he should be sorry to say one word in depreciation of what the author had said, and very well said, so far as he went, he must freely express his disappointment that he had left so much unsaid, or only partially said.

Interesting as the Paper certainly was, as a *résumé* of the whole subject of House Sanitation, it could not be said to specially deal with it "as an increment of value" in the monetary sense of the term. As a matter of fact, this aspect of the subject was summarily disposed of in a single page of the Paper.

The supplement to Mr. Rogers Field's useful contribution to the discussion sufficiently indicated what he (Mr. Robins) referred to as wanting in the Paper itself. Yet its perusal had afforded him great pleasure, and he could not doubt that good must result from so clear and forcible an exposition of the general principles and common practice of House Sanitation, and the able manner in which he had

contrasted the present interest with the previous apathy displayed by the public with reference to these matters.

Still, the Paper was "Hamlet without the ghost"; and he did not feel himself a bit better fitted than before to estimate the said "*increment of value*" for anything specially contained in the Paper, although the author had said enough to show that he could have given the required information, had he chosen to do so, alone or with the aid of others.

It was said (page 265) that the *extra* cost of the Sanitation (carried out in strict accordance, he presumed, with what had previously been shown to be essential) of a house of 25 ft. frontage, 60 ft. depth, and 60 ft. high—containing, therefore, 90,000 cubic feet, and costing to build some £3,000—would not amount to more than £60; but that to alter such a house after it was finished on a wrong principle would cost £150, or 2½ times as much.

It was said, on another page, that an ordinary house, of a rental value of from £100 to £200 a year, could be converted from an insanitary to a sanitary condition for a sum not exceeding £300, or twice as much as the house costing £3,000, before referred to. These statements were so contradictory that he could not see, from the details given, how "the valuer was to readily estimate the increased advantages and benefits of Sanitation at a money value."

According to Mr. Rogers Field, in the case of a semi-detached house, costing £900 or £1,000, the extra cost of good Sanitation, if done in the first instance, would amount to £18; but to alter it after it was first constructed would cost some £70 or £80, or four times as much. At this rate, a £3,000 house might cost £54, or very nearly the sum (£60) stated by Mr. Collins, in the first instance; but, in the case of subsequent alteration, a £3,000 house might cost from £210 to £240, instead of £150. Mr. Warner,

again, had stated that he could quote cases in which the outlay had varied from £300 to £1,500. Obviously, this loose way of stating facts was no help to a Surveyor who wanted to estimate the real increment of value in justice to both parties to the contract. He (Mr. Robins), although he was not a specialist, could himself supply many instances from his own experience, as Surveyor to a large estate in Oxford Street; but he doubted whether any one man's practice gave sufficient data for judgment: at least a dozen cases of, say, half-a-dozen men's experience were required. If this Institution were to appoint a Committee to collect facts, to tabulate them, and form an average of many men's experience, an authoritative result might be achieved. The half-dozen specialists among architects and engineers would willingly supply the information required, and Mr. Collins' Paper would become a fitting introduction to a Report of the Committee of the Institution on the whole subject.

Such a report would be a useful supplement to the evidence of the specialists taken at the Society of Arts, which was published in the report of the Conference of 1880, to which Mr. Cresswell referred, and from which he (Mr. Robins) quoted the latest intelligence in sanitary practice in his Paper read at the Royal Institute of British Architects.

Like everybody else interested in sanitary matters, he was sorely tempted to digress, but would refrain. These matters were not so novel as some supposed. It was more than a quarter of a century ago since he acted as Honorary Architect and Secretary to a Local Board of Health in St. Pancras. The cholera of 1852 had been raging, and he undertook the Sanitation of the parochial district with which he was connected, and which comprised one-seventeenth part of the whole parish. The result of this effort to establish a precedent for local sanitary exertion was

published for private circulation, in the form of a pamphlet, entitled "A Practical View of the Sanitary Question." His knowledge and part inspiration for the work was obtained from a study of the Blue Books of the General Board of Health, of which Sir Benjamin Hall was the President, and Mr. Chadwick the genius. The extraordinary inaction of the parochial authorities, as contrasted with the zeal of his self-constituted Local Board, taught him early in life that no preventive laws were of any avail which were not felt to be the interest of everyone, particularly the executors of the laws, to see carried out. Mutual protection and the common weal was the motto of his Local Board, and what was the result of its labours? Why, it was calculated that if as much sanitary work had been done in all London in those years 1853 and 1854 as was done under his honorary direction and supervision in that one corner of the Parish of St. Pancras, no less than 284,760 separate sources of infection would have been abolished; 1,000,000 cubic feet of fœcal matter would have been removed (sufficient to cover the whole area of the Green Park with a layer of soil matter six inches thick); 328 miles of foul house drains would have been renewed or cleansed, and syphons trapped at their connection with the sewer.

The increase of knowledge and the improvement in practical details and sanitary appliances were great; but the value of a Paper on sanitary subjects was not in proportion to its novelty, but rather to the earnestness of the writer and the patient iteration of facts well known but rarely acted on. What was wanted, and what people had a right to expect, was nothing less than this—that the same devotion which was shown in the design of the beautiful among architects should be given to the consideration of the useful; that no good work shall be accounted "common

or unclean," and that the same enthusiasm which was evoked in the pursuit of scientific theories and constructive triumphs should be awakened by that which lies at the root of the maintenance of the healthful conditions of life.

The lower orders took their cue from their superiors. The Architect and Engineer, or Surveyor, who thought it beneath his intelligence to look after the drainage of the buildings, for the sanitary condition of which he was responsible, would find the builder and contractor equally high-minded; and the foreman would leave such work to the commonest of his unskilled labourers, to whom the least pay was given, and on whom the least supervision was bestowed; the consequence being what all had seen enough of to stir them up to a nobler conception of their duty in this matter.

Mr. W. P. Goulding (Member) said it seemed to him that, in spite of the hint given by The President on the first evening of the discussion, to the effect that the "Increment of Value" was the principal matter for consideration, the gentlemen who had hitherto spoken had rather gone round than attacked the subject of the Paper. Perhaps it was natural, in cases like this, to flutter round the question of construction. In point of fact, there was some difficulty in finding a satisfactory answer to the query, whether or not any increased value was added to a house in which all the modern sanitary appliances had been placed, as against a similar house in which all these things had been neglected. To a purchaser for occupation, it was more than likely that there might be an increment of value in the first of these cases, but to anybody else there was probably no such estimated increase in the value. It was not necessary to look far for the reason, for, as Mr. Collins had suggested in the second page of his Paper, it was to some extent a pocket question. There were a few

who had had illness in their families, or had, perhaps, lost children, through defective drainage, and then they were ready enough to run about and seek a remedy for sanitary evils; but what owner or Surveyor, dealing with land, found any appreciable addition to the ground rent arising from the fact that the specification attached to the building agreement stipulated that certain sanitary measures must be carried out?

The average speculative builder would not do much in the shape of Sanitation, and the more he was pressed the more he would shirk doing it; for he was well aware that there was no greater competition among purchasers for a house well conditioned as regards sanitary matters than for an adjoining house in which, perhaps, every provision of the kind had been neglected. He thought, therefore, that the answer to the question, "What is the increment in value?" was that there was no increment of value, and that the only thing to do was to endeavour to awaken the public from their indifference. Nothing could be more deplorable than the present state of things, but no good would be done by trying to soar to the top of the tree at once. The public must first be educated on simple points before they could appreciate others of a more complicated kind; and there were certain inexpensive devices, as all present would agree, which afforded a ready means of dealing with these evils. In many cases it was, of course, out of the question, principally on account of cost, to put up the very ingenious and beautiful flushing cistern which Mr. Rogers Field had exhibited, and physically impossible, in the case of most terrace houses, to bring the drainage in any way except under the basement, however desirous one might be to avoid doing so. As Mr. Eve said at a previous Meeting, the combined system was, unfortunately, objected to in many districts. The public were already partially educated in these matters, and

although, as he had said, there was no actual increment of value recognized as arising from good Sanitation at this moment, yet there certainly was much more enquiry than formerly for houses in which attention had been paid to sanitary requirements.

For these reasons he thought the result to be looked for was not so much an increase in the value, as a greater demand for houses which were carefully drained, and otherwise constructed according to known and approved methods.

There were a few things which he hoped the Members of the Institution who acted for building-owners and advised for proposing occupiers, would insist on—viz., that the kitchen sink, the housemaid's sink, the bath and lavatory discharges, should be cut off from direct communication with the drain; that the water supply should be divided—that used for drinking purposes being stored in a separate cistern; and that the soil-pipe should be well ventilated to a point a sufficient height above the roof. If Surveyors insisted on those simple things, all easy of inspection and the cost of which was trifling compared with the benefits conferred, the public, who were now becoming less careless in these matters, would in time be led still further on the road to sanitary perfection.

Mr. G. Barnard (Visitor) said that he proposed to adopt a plan to do away with sewers, and collect the whole of the sewage for agricultural purposes. It was a valuable commodity; and, instead of allowing it to run into the sewers, he collected it in a metal receptacle outside the walls of the house. The receptacle was kept air-tight, a ventilating pipe passing from it to the top of the roof, through a vessel containing charcoal, which deodorized the gases completely. The cover slid up and down on the discharge pipe, so that the receiver could be removed when full

and another substituted. It was calculated to hold from 200 to 300 discharges. The bottom of it was perforated with a few holes and covered with a little earth, through which the water flowed into a series of troughs containing earth, and placed in a zigzag, to save room. Four troughs, 4 ft. in length, gave 16 ft. of earth—quite sufficient to ensure the perfect clearness of the effluent water. The plan had been in operation at his own house for the last three months with complete success. When the metal receptacle was full, the sliding cover could be raised and a flat cover substituted, after which it could be taken away in a specially-constructed waggon, and its contents applied as a fertilizer to the fields. The expense of the apparatus was about £2, with wooden troughs. Earthenware troughs, which would last much longer, would cost about 25*s.* each. He had made a calculation of the outlay required for 500 houses, assuming the average number of 7 people in each house, or 3,500 people. The late Sir Bulwer Lytton put the value of the sewage at £1 7*s.* per head in Flanders, and more in Belgium ;* but, even assuming it to be but 10*s.* per head, the total amount for 3,500 people would represent £1,750 a year. The cost of keeping up three waggons, three pairs of horses, and four men (quite sufficient to do all the work of those 500 houses) would be under £500 a year. He estimated that the sewage of the 500 houses would yield a net profit of at least £1,000 a year. The great point, however, of his plan was the getting rid of the sewers.

Mr. C. J. Mann (Member) thought, to use the words of a speaker at the last Meeting, that Mr. Barnard had broken fresh ground in calling attention to the earth system—a system which was very valuable, and should not be lost

* See *Lancet*, 25th October, 1862.

sight of in this discussion. When carried out with proper care, it was so perfectly successful that he was inclined to believe that it could be applied without much difficulty to towns. The sewer system might answer fairly well at the present time; but he thought that people were making a rod for their own backs; they were even now drinking filtered sewage, and would find before long that the sewers were becoming more and more intolerable, and be driven to the earth system. He would like, therefore, to hear that system treated a little more fully in this discussion.

The state of things described in the Paper was only too true of large classes of property all round London. Taking the average run of building estates, the first object with the owners was to get them covered with houses, and the next to get tenants for the houses. The building-owner was not very particular as to the class of tenants he got to begin with, and the tenants cared nothing for sanitary arrangements so long as they got cheap houses, and the builders had, consequently, no inducement to spend money on things of the kind. But, in course of time, the property improved in value, and the rents went up. The more respectable class of tenants who then took the houses were less easily satisfied, and began to enquire into the drainage of their houses—perhaps calling in a Surveyor, who found that a considerable outlay was necessary to put matters right which would have cost very little to do properly in the first instance. He was glad that the subject had been brought before the Institution, for the more it was discussed the more unwilling people would become to take houses in which the simplest sanitary requirements were disregarded.

Mr. C. G. Grey (Member) observed that if the new sanitary science, as it was called (though, as a matter of fact, it had been known and practised for years), was to be

so generally applied as had been suggested, especially in rural districts, it should be under competent control. He had known great mischief result from medical officers and sanitary inspectors compelling people to construct drains which generated dangerous gases, when the best of all possible disinfectants were at hand in the shape of abundant earth, fresh water, and fresh air.

Mr. R. W. Mann (Member) wished to repeat the question which he asked on a previous occasion (page 272), with reference to the necessity for placing cisterns in a good light. He would be glad, also, if Mr. Leeds would explain what happened to the extracting flue (described in page 281), when the kitchen fire went out. The object of placing the extracting flue near the kitchen fire was to extract the gas from the drains, and as one Member (Mr. Warner) had said, "it would be a public benefit if some better plan for ventilating the main sewers than the existing method of doing so by openings in the middle of the roads, could be adopted. Could not some kind of furnaces be erected which would get rid of the gas from the sewers, and ought not the authorities to see to this?

Proper ventilation of the drains and proper connection with the sewers were coming to be regarded as forming a distinct increment of value in house-property. He found, as a matter of personal experience, that houses which were not properly drained and ventilated were constantly refused by intending tenants, and, very recently, a person to whom he was proposing to let a house declined to go into it until a Sanitary Engineer had been over it, to see whether it was properly drained and ventilated.

Mr. W. F. Hart (Member) pointed out that, under the regulations sanctioned by the Board of Trade and the

Metropolis Water Act, 1871, waste-pipes to cisterns were absolutely forbidden. The Water Companies would no longer allow them; therefore, all connection between the drain and the cistern was cut off wherever these regulations were enforced. Moreover, the supply to closets must be regulated by a waste-preventer or feed-cistern, and nothing but a warning-pipe was allowed, so that the question of contaminated water was practically already met. If there were a connection between the cisterns and the drains, the consumer was bound to have a waste-preventer, and if, as Surveyor to the Lambeth Waterworks, he found a waste-pipe existing, the Company declined to lay the water on till it was removed.

Mr. Wm. White, F.S.A. (Visitor), would be glad if Mr. Barnard would inform the Meeting whether his system had been applied to more than one house; for, if what he had said was borne out by practical experience, the adoption of the plan which he advocated would add greatly to the value of the property, because it would save, to a very large extent, the main drainage rates, and give some slight return on the outlay.

Mr. Barnard replied that he had only had the apparatus at work at his own house. It had been in operation for the last three months—since the first week in January—and answered admirably. The effluent water was always clear, and the air emitted from the ventilating pipe was perfectly free from odour, after passing through the charcoal. He would be perfectly willing to show the system to any gentleman who chose to call upon him.

Mr. W. Rex (Associate) thought that a very great and growing interest was now displayed with regard to drainage

and the Sanitation of houses. Even the lower classes were taking the matter up, and as soon as there was anything wrong with their drains, however trifling, even the stoppage of a w.c., they ran down to the Vestry Hall, and applied to the Sanitary Committee. If the complaint was not attended to in the course of twenty-four hours, he found by experience that they called in the Sanitary Inspector, who sometimes insisted upon a considerable outlay if the house happened to be without pipe drains. The result was that the smaller class of property was gradually getting into a much better condition in this particular.

As regarded the disconnection of the water supply from the drains, he might mention that the New River Company kept several inspectors going about carefully inspecting all the water arrangements of the houses, chiefly with the view of saving their water, and they were enforcing those regulations which had been mentioned by Mr. Hart. The inspectors served notices, from house to house, demanding the abolition of waste-pipes, and the substitution of telltale-overflow-pipes, so placed as to cause annoyance to the inmates in the event of the cistern overflowing. By this means the water supply was getting cut off from any connection with the drains over a large area in the north of London. A constant supply would do away with the cisterns, which were so great a source of water-pollution, and would be a great benefit to the Metropolis. The system described by Mr. Barnard would, he thought, do very well for country places, where the fields were close at hand; but it was hardly likely to be adopted in London, with its extensive sewerage, for a good many years to come.

Mr. Collins said that, before proceeding to reply to the discussion, he would, with the permission of the Meeting, read an extract from a letter, addressed by Mr. Robins to

THE SECRETARY of the Institution, which answered, in a great measure, many of the observations which had been made in his Paper.

"As Surveyor to the Berners Estate of some 600 houses, and as an architect interested in the progress and practical application of sanitary science generally, I very earnestly sympathize with the subject of the Paper to be read and discussed, and am very sorry to be absent.

That the increase of value is real and not imaginary Mr. COLLINS will be able to prove. That it should be taken into consideration by Surveyors that good Sanitation in house-property is an important increment of value, is a necessary result of the primal admission, in common fairness.

If it is done by the proprietor, he may righteously claim interest for his capital so expended.

If it is done by the lessee, it is a fair addition to the value of improvements—as distinct from ordinary repairs—which may properly be taken into account when estimating the terms for the renewal of the lease to the lessee who has so improved his holding.

I take it as an axiom in my practice that a proprietor is justified in accepting and profiting by the improvements made by the lessee with his sanction.

But better terms (that is, *lower*) should be granted when renewals are made to improving tenants than may righteously be claimed from new lessees; in short, it is the interest and duty of the proprietor to give encouragement to improving tenants, more particularly if their expenditure is of a character which not only increases the value of the holding, but is a *public benefit*, as it always is when good Sanitation has been promoted."

That was a practical mode of dealing with the question, and corresponded with what he hoped would be the conclusion arrived at in the course of this discussion.

It had been objected that his Paper did not contain anything but that which was already known. His answer was, that he claimed no particular originality: what he had endeavoured to do was to direct discussion towards practical considerations of a kind likely to enlist the sympathies of everybody interested in the value of house-property.

How important a bearing, Sanitation had on the value of such property, had become more and more evident as the discussion proceeded. Take the case of the Water Companies' regulations, referred to by Mr. HART. If the Water Companies determined to give, as they should, a constant supply, every householder would be put to considerable expense in altering his fittings. Mr. HART had informed him that in the Lambeth Company's district alone, during the last two years, ten thousand houses had been altered in this way. The amount of money expended in carrying out those alterations represented an investment in sanitary improvements, and formed a most important increment of value. Much that was now urged by Sanitarians was no doubt far from new, but he demurred to the expression "sensational," used by Mr. CHATFEILD CLARKE in referring to the facts on which they laid so much stress. These were questions of life and death.

The experience of a large number of Surveyors and Sanitary Engineers proved the fact, that an enormous amount of illness and preventible mortality was occasioned by neglect of the most simple and elementary sanitary precautions. Only the other day two hundred people in one small village had been killed by typhus—that is to say—killed by neglect of Sanitation; and anyone familiar with the literature of the subject could multiply examples and thus refute the allegation that the facts were sensational in character.

He had endeavoured, in his Paper, to demonstrate from actual personal experience the effects—moral, social, and physical—of the neglect of Sanitation; had laid down certain elementary principles which every Property Surveyor should apply, and had pointed out how defects might be remedied at a comparatively trifling expense.

In answer to Mr. MANN's question, he did not mean that light was necessary to keep water sweet, but to secure

cleanliness and easy inspection of the cisterns. It often happened that rats and other vermin found their way into the cisterns, and remained undiscovered, owing to the fact that they were placed out of sight and, perhaps, out of reach, and were neither cleansed nor inspected from one year's end to another—unless an outbreak of disease called attention to them. He might mention that Dr. Stevenson McAdam, of Edinboro', had shown that certain animalculæ—algæ and confervæ—grew in and inhabited water which was often considered, from that circumstance, unfit to drink; whereas the fact of finding them there showed that the water was of the greatest purity. Water bugs or beetles were frequently found in water; whilst it was not pleasant to see them there, their presence proved the absence of those decaying or putrefying substances which were fatal to animal life.

His position had been considerably strengthened by the remarks of Professor Kerr. That gentleman, after trying to throw some ridicule on the subject, went on to ask, "What would be the position of the Surveyor who had advised the taking a lease of that house, and received a fee, when he got a letter stating that a Sanitary Engineer had been consulted and had declared the house to be in an insanitary condition? This was what matters were coming to, and it behoved Surveyors to take impending circumstances into careful consideration." This was a point which touched the interests of Surveyors, and, he thought, was likely to occupy the attention of the Law Courts before long. If, therefore, his Paper did nothing further than warn Surveyors to take care of themselves, and to look at this question in a practical light, it would do some service.

The architectural profession to which he belonged was, he feared, fairly chargeable with some neglect with regard to these matters. No doubt Architects possessed the necessary

knowledge, and this being so, he could only say that, if they knew this virtue, it was a pity they did not more often practise it. They had, he thought, earned the blame imputed to them as a profession, by their indifference to these matters. If proof were wanted, he had not far to seek it. Only the other day, when the Supplemental Estimates were moved in the House of Commons, Mr. Gorst moved an amendment to reduce the amount by £6,750, the sum set down for sanitary improvements in the public offices. Mr. Gorst's view was that, as the sanitary state of the public offices was so unsatisfactory, they should not accept the vote, not knowing what further expenses might be incurred. If further proof were wanted, he would supplement Mr. Gorst's remarks with some observations of Mr. Rawlinson's with regard to these same Government offices. "The drains coming from the buildings had flap valves where they entered the sewer; these drains went direct into the buildings, without any break, or other means of ventilation, to prevent the inflow of gas. The closet in the corridor leading to his office was occasionally so bad that he could not use it. Sometimes the wind entering from the drain would, he believed, have blown out a lighted candle, and the stench was horrible. Every drain had been tried upon that length of sewer all round Whitehall, and there was not a single instance where the inflow was not direct into the building. If such things were properly attended to, the rates of mortality would be very different." Mr. Rawlinson added that, if he were offered a large salary, and were compelled to take his office to Somerset House, he should decline, for he knew that it simply meant death to him.

With these facts before them, it was necessary to boldly face the matter, not to shirk it, or to pretend that things were otherwise than they really were. He had the greatest

regard for his profession, but he did not want to close his eyes to facts which were self-evident. If the sanitary engineer had been called into existence, and had taken up a position as a specialist, it was, as he said in his Paper, because the architectural profession had apparently not proved itself equal to the occasion, and had failed to meet the question as it should have been met. He had in his own practice much for which to thank the medical profession, and a great deal more for which to be grateful to sanitary engineers.

He quite agreed with what had been said with reference to the so-called Sanitary Protection Associations. They recalled to his mind those "Dr. DULCAMARAS," whose practice it was to enter the market places heralded by a fanfare of trumpets, largely advertising themselves as possessing a panacea for all and every mortal ill, which they offered to their victims for the smallest coin of the realm.

Some remarks on this head had been made which, he thought, should not be lost in the files of a professional Paper. They were contained in a letter published in the *Building News* of the 21st of January, 1881. The writer, Mr. JOHN S. HODGSON, of Hexham, went into some calculations to test the value of the system of sanitary assurance advocated in a Paper read by Professor JENKIN, of Edinburgh, before the Society of Arts. Mr. HODGSON writes: "Professor JENKIN states that the resident engineer of the parent association in Edinburgh is paid at the rate common for men of his standing, and that the consulting engineer receives a fee which, *having regard to the call on his time*, is remunerative.

"Now, our examination of the figures in the Edinburgh Association's balance-sheet for the second year, as appended to the Paper, shows that a salary rising from £150 to £170

per annum has there been paid to the resident engineer, and that the annual remuneration of the consulting engineer (Professor JENKIN himself) is £52 10*s.* The Association has been in existence not quite three years, during which time 1,200 houses are stated to have been improved, the total cost of Professor JENKIN's services being thus £157 10*s.* at most—an amount which, divided by 1,200, yields the munificent average of 2*s.* 7½*d.* per house as the remuneration of the consulting engineer, by whom, as he himself states, this amount is considered "remunerative." The explanation of this seeming paradox may possibly be that, in the large majority of cases, the projected alterations are never brought under the notice of the consulting engineer at all, but effected upon the sole responsibility of the resident and subordinate official. But, if this be so, the fact assuredly militates against the fundamental idea of the Association, by which the aid of co-operation is invoked in order to secure eminent and authoritative advice in contra-distinction to the counsels of second-rate and inexperienced persons. Pursuing the financial question still further, and taking the salary of the Edinburgh resident engineer at £150 per annum for the first two years and £170 for the third, it will be seen that a total of £470 for the three years is to be considered under this head, which, treated as before, yields an average of 7*s.* 10*d.* per house for the 1,200 which have been improved. Making every allowance for the benefits of co-operation and the extolled absence of pecuniary gain for the Association, it is simply impossible that sums such as these can be considered sufficient to secure the requisite amount of engineering supervision over works under execution, especially when the peculiarly detailed nature of house-drainage work is considered.

"On this point I would just draw attention to a flaw in the argument advanced by Mr. ROBINS, who quotes a case

in which certain recommendations of the Edinburgh Association were carried out at St. Andrew's by local workmen, and afterwards inspected, presumably, by the officers of the Association. No one, with any knowledge of the subject, would wish to depreciate the advantages, and even the necessity, of good design in work of this class; but it would be idle, at the same time, to ignore the fact that faultless execution is just as much to be kept in view, and this it has over and over again been found impossible to secure by any so-called system of final inspection, or, in fact, by anything less than the most minute and skilled supervision over such items as pipe-laying and jointing and the setting of traps and other fittings. No adequate inspection of such work can, by any possibility, be performed by one man who, as stated with regard to Edinburgh, has been expected to visit 450 or 500 houses per annum, in most of which, as the figures show, structural alterations have been in progress at the time referred to.

"There is one other objection which, it seems, has already been raised against the formation of the London Association —that of unfair competition with professional men as sanitary advisers. This, while Professor Jenkin alludes to it in his Paper, he takes no pains to meet in any effective way, although it will probably be admitted that the figures already quoted constitute a remarkable confirmation of the charge. An Association which tacitly claims to be in a position to supply the engineering advice and control requisite for the sanitary improvement of a house, for an average sum of 10*s.* 5½*d.*, can hardly be said to leave much scope for remunerative charges by professional men for their, evidently, more deliberate and exhaustive treatment of a residence."

He (Mr. Collins) read this because it was simply absurd to suppose that these Associations would do more than

create a fools' paradise. He agreed with Mr. Chatfeild Clarke that it should be either business or philanthropy. If it were business, a fair day's work was entitled to a fair day's wage. If the gentlemen who had formed themselves into a Council (many of them persons of high standing and repute, whose time was fully occupied in their own professional occupations) gave the requisite amount of time and attention to the subject, then the consulting engineer might possibly be able to do all that was required of him for the remuneration named; but if they did not (and he had no hesitation in saying that, in some towns which he had visited, Councils were mere myths), instead of advancing the cause of Sanitation, these gentlemen were lending the weight and influence of their name and position to retard it and thereby to misguide a confiding public.

To show how perfunctory such an examination must be if carried out at the cost per house given in Mr. Hodgson's letter, he might mention that Mr. Rogers Field and he himself had been recently called upon to make an investigation into the sanitary condition of a house, where no plan of the drainage could be found, and it was necessary to have the workmen in to remove the earth, in order to find out where the defect occurred. The work occupied their assistants four or five days, and themselves one whole day, as well as the time taken up in making reports and drawings, in order to trace the evil which they knew existed, and subsequently found. He could only say that he was not rich enough or philanthropic enough to do such work for the sum of 2*s.* 7½*d.*

It was incumbent on Surveyors to do their duty in these matters. Let them, when they found a house built in defiance of sanitary principles, say fearlessly, no matter how great the name of the Architect who designed it, "This house possesses such radical defects that we do not advise

you to take it unless such and such a sum is expended, to render it fit to live in." If that were done more frequently, proper Sanitation would come in time to be regarded by the public as a real increment of value.

He was afraid that Mr. LEEDS had misconceived what he (Mr. COLLINS) intended to convey in his Paper. The difference between Mr. LEEDS' plan and his was that he (Mr. COLLINS) would keep the house perfectly pure by a system of absolute disconnection, which secured the constant passing of a current of air up the drains and, by means of Mr. ROGERS FIELD's apparatus, a current of water down them; and therefore there was nothing to convey away from the house, because nothing entered it. With Mr. LEEDS' plan, a slight undetected leakage might introduce dangerous gases and attendant diseases into the house, whereas with total disconnection this was impossible, and the water closets might be placed against the external walls without any such dangers as Mr. LEEDS had referred to.

There were some curious misconceptions on the subject of currents of air. Some people, for instance, expected the heated products from a gas burner to flow through a tube to the open air, whereas it was the exactly opposite result to this which took place. It was the same with sun burners, the cold air was sucked in and down and created draughts. The plan proposed by Mr. LEEDS would, in his opinion, operate in the same way; instead of carrying the foul air away from the house, it would bring it in. Then Mr. LEEDS had objected to his plan on the ground that there might be, in particular states of the atmosphere, a smell from the lower openings to the drains, but he could answer this by quoting the opinion of Dr. BUCHANAN on this point, who admitted that, if the drains were not in good order, there would be a smell from the lower opening, which smell should be welcomed as an indication (otherwise wanting until ill-

health occurred) of something about the drains requiring amendment.

Surveyors would do well, he thought, to endeavour to enlarge as much as possible the length of leases. The instructions usually given them were to lay out the ground so as to obtain the greatest amount of rental, regardless of all other considerations; but, in so doing, they were frequently damaging the interests of their clients, as, with the growing sense of sanitary necessities, much of this property was certain to be condemned in course of time by the sanitary authorities. Owners of land would be wise to concede more liberal terms, to demand less ground rent, and so help to create a good class of building. The advantage of the broader treatment of properties was shown in the case of the Sir Maryon Wilson's Estate, at Hampstead, which Mr. Alderman Ellis had immensely improved, by laying out wide roads, and giving plenty of space to each house.

He trusted that the result of his Paper would be that the Members of the Institution would give more consideration to the matter in their everyday dealing with house-property, and would bear in mind Pope's sarcastic lines on the Duke of Marlborough's house at Woodstock:—

> "Thanks, sir, cried I, 'tis very fine,
> But where d'ye sleep, or where d'ye dine?
> I find, by all you have been telling,
> That 'tis a house, but not a dwelling."

The President, in summing up the discussion, said that he gathered, from what had been said, that the first thing wanted to develop this dormant increment of value was the education of the people, so that they might be able to distinguish what was really worth buying from what was not. This value was what a house would let for to a man who understood what he was taking: what a house would

let for, properly drained and provided with every sanitary appliance, as compared with a house that was not so provided. Now, he could give a practical illustration. He knew a house which was let furnished to a wealthy family, who had no sooner taken up their residence in it than one of them became seriously ill, and an eminent doctor was called in, and reported that the house was in an insanitary condition. The whole of the family immediately left it. Several Surveyors and Sanitary Engineers were requested to come down and examine the house, and the necessary alterations were made; but nothing would induce the tenant to return. Now, as the rent of the house was several hundreds a year, the loss or the depreciation resulting in this instance from insanitary condition represented a very large sum of money, and illustrated the difference in value between property in a sanitary as compared with property in an insanitary condition.

There were instances also where whole towns were in ill repute on the score of general unhealthiness, and houses in those towns did not let so readily or so well as houses in other towns which enjoyed a reputation for healthiness. Notwithstanding some observations made to the effect that houses badly built let as readily as houses that were well built, and that there was, therefore, practically, no improvement in value, he inclined rather to the view that in the long run good drainage did repay the outlay on it.

A suggestion had been made that a lessee who improved the property during his term should be paid by the lessor for his improvements. It should, however, be borne in mind that the relative positions of proprietors, lessees, and occupiers were all fixed by the terms on which they held, and it might be that the proprietor was so circumstanced as to prefer to be without a lessee who expected him to pay something at the end of the term. Thus it might happen that

the proprietor's whole income was derived from this property, and that he did not know where to get the money from, unless he mortgaged his property, which he might be unwilling to do.

Again, when it was said that land should be let on building leases at more liberal rents, it should be remembered that the generality of men who took land did so as a speculation—to make money out of it. He knew the wide roads on the Hampstead estate made by Mr. Aldermen Ellis, and he also knew the cost of those roads, and was not sure, regarding it as property, whether it paid to go to that great expense. Of course, it was much better for the neighbourhood. The Duke of Westminster similarly regarded it as a benefit to Pimlico to sacrifice very good houses for the purpose of re-arranging the streets and laying them out in a more commodious manner.

The Institution was obliged to Mr. Barnard for showing the model illustrating his system of disposing of house sewage. It seemed to him that what Mr. Barnard was doing (if he would allow him to say so), was applying the earth-closet system in a manner of his own. This system was admirably adapted for small villages and small property. He had given it a fair trial at his house, with this result, that he objected to it entirely indoors—not because it did not answer, but because it did not look nice, and he thought his house with the w.c.'s indoors was a more valuable property than it would have been if he had allowed the earth closets to remain. He retained the earth closets out of doors, and they were very capital things if properly managed, but they wanted careful attention. The earth had to be kept dry, and it should be the business of one man to attend to them. Nothing could be nicer or better for cottage property, providing that, once a week, the soiled earth was removed, and fresh dry earth put in its place.

Mr. Barnard explained that his were water closets, and not earth closets.

The President replied that Mr. Barnard had earth in his troughs.

Mr. Barnard said that the troughs were outside, and that the closets were water closets.

The President (resuming) thought that the result of the discussion was unfavourable to the idea of placing the w.c.'s in the centre of the house, as suggested by Mr. Leeds, instead of against the outside walls.

He had slowly come to a conviction that those who could afford it would add to the value of their property, if, instead of one large cistern, they put up several. When an accident happened to the only cistern in a large house, all the places supplied from it were left altogether without water. With several cisterns, it would rarely happen that the house would be left entirely without water.

It was urged by Mr. Gray that rural authorities, if they employed anybody at all, should employ a skilled man. It was not always easy to get a skilled man in country districts, and what was more difficult still, was to get the money to pay him. Indeed, it was very difficult to know how to carry out any system of sanitary improvement in rural districts without exciting a large amount of opposition. His own conviction was that, if a rural district could be provided with a good supply of water, its drainage might be left alone for a long while.

The Meeting then adjourned.

No. 96.]

LAND LAW REFORM.

By G. M. FREEMAN (Associate).

Read at the Ordinary General Meeting of the Institution of Surveyors, *May 2nd*, 1881.

THE PRESIDENT IN THE CHAIR.

When one of the legal Associates of the Institution of Surveyors has the honour to read a Paper before its Members, I conceive his object in the choice of a subject should be two-fold. He should endeavour, in the first place, to seek a question of immediate and primary interest; and, in the second place, to seek a question which is closely related to the interests and profession of the Members, while at the same time covering ground with which his own studies have made him familiar. Such a subject, I believe, is contained in the great question of Land Law Reform. It is a question which is more and more coming to the front; and which at no distant day must engross the attention of Parliament and the country. It is a question on which at least three Committees of the Houses of Lords and Commons have taken a vast mass of evidence; on which three Chancellors, besides numerous private members have attempted legislative reforms, as yet, unhappily, abortive; on which a great company of noble lords and territorial proprietors have harangued; and on which an almost countless number of experienced agriculturists and able Surveyors have offered more or less valuable suggestions. Above all, it is a question in which all Members of this Institution must be deeply interested, on the two-fold ground that it is indissolubly associated with the subject-matter of their professional lives, and that, before any reform which is to be final can be

carried, their opinion must be largely consulted and their views adopted. It therefore seems to me that, however imperfectly this great question may be introduced to-night, it is one in which discussion should be provoked, with the present object of enabling Members of the Surveying body to learn the views of their compeers, and with the future object of assisting public opinion. Suffer me to add two remarks by way of introduction. One is, that this question is entirely a national one, and as such deserving of consideration without any political bias. The late and the present Lord Chancellors have both endeavoured to remedy the existing defects of our Land Laws; so have men no less opposed in their party allegiance than the Marquis of Salisbury and the Duke of Argyll, Mr. Cross and Mr. Gladstone. Thus, while the remedies proposed are as numerous as the individual proposers, the necessity of some remedy is universally admitted, and it therefore becomes the duty of each citizen, so far as in him lies, to render the reform, whatever it may be and whenever it may come, universal and final. The other remark I would make is this. In the present Paper, I desire to abide within the strict limits of the practical. Abstract questions will be sedulously avoided, and I shall not weary the patience of Members by asking them to examine the merits of peasant proprietorship, or compulsory expropriation, or any other of the numerous questions which, as philosophical questions, may be entitled to consideration, but which would be entirely misplaced in a professional discussion.

Now, what is the ground for this cry for reform of the Land Laws in England (for it is exclusively with England that we are here concerned), and what reason exists to justify that cry? Land, like the products of commerce, is a source of national wealth; and political economy is entitled to demand that land shall be so treated as to produce the

greatest amount of wealth to the country; with one proviso, namely, the rights of responsible private owners shall be treated with the most inviolable consideration. Now, the facts as regards the land of England, stated shortly (and all through this Paper I must ask you to accept largely on trust statements the proof of which time must prevent my giving), are substantially such as I am about to lay before you.

In this inquiry, if we are to arrive at any practical results, we must proceed by steps. The first question, therefore, will be, Is the land of England in such a condition as to require a different treatment over large areas from what it at present receives? The next will be, Will those remedial measures be obtained or accelerated by any and what reforms of the existing Land Laws?

In the first place, I do not suppose that it admits of serious dispute that over millions of acres of exhausted, heavy, or neglected land, an investment of capital, at rates varying from £10 to £30 per acre is required, in order that such land may let at a reasonable rental, so far as the landlord is concerned, and produce a reasonable profit for labour, so far as the tenant is concerned. Over many estates, the farm buildings are quite inadequate to modern necessities: old hedgerows have been suffered to spread and grow until they usurp an excessive amount of space, which they render unremunerative by their useless and often noxious shade; the land, left to its own resources, demands liberal dressings of chalk, bones, manure, and other artificial aids; while the roads have been left in their primitive condition, rendering the approach of the heavy machinery of modern agriculture difficult and, sometimes, impossible. But, beyond and above these matters, under the single head of drainage, a large, though unquestionably a very remunerative, expenditure of capital is

required. Until this is done, vast areas of land must remain practically unlet, and all surface improvements will be useless. On these facts it is quite unnecessary for me to dwell: they are well known to, probably, every Member present, and have been enforced without contradiction for many years past, both by landlords and farmers, by theoretical statesmen, and by practical Surveyors. Indeed, so obvious was the truth of the statement, that land, to be productive, required a larger amount to be expended on works of drainage and other permanent improvements than was ordinarily provided, that, as early as the year 1845, Parliament endeavoured to meet the demand by enabling the Enclosure Commissioners to grant loans for the purpose of assisting landlords to carry out drainage works; the loan to be secured by a rent-charge upon the land. Almost yearly, Acts were passed amending this Act, and rendering its provisions more tempting; the Treasury being authorized in 1850 to advance £2,000,000 for this purpose. Various companies also were formed to carry out similar schemes, and private enterprise assisted Government in tempting the owners of property to improve their land. Also, life tenants were empowered to apply to the Court of Chancery, and, if satisfied that the proposed permanent improvements would be for the benefit of all parties concerned, the Court might grant leave to the applicant to raise money at 5 per cent. by a charge on the land, the money to be repaid in annual instalments, not less than 12 or more than 18 in number. After this system had been in force for 26 years, a Committee of the House of Lords sat, to inquire into its working and suggest any improvements therein. A great mass of evidence was taken before that Committee—evidence of men who had spent their whole lives in agricultural relations, and who were reasonably regarded as the best authorities on the questions before the Committee. After patient inquiry, a very valuable

report was drawn up by Lord Salisbury, in which he states, as a result of the evidence given, that, up to that time, viz., 1873, "what has been accomplished in land drainage and improvement is only a small fraction of what still remains to be done"—or, as he puts it further on, with all the assistance which the Enclosure Commissioners and private companies were prepared to offer, only three million acres had been drained and improved out of 30 millions which required such treatment.

Now, when we remember that, in every case where these expensive improvements have been effected, the land has paid a very high interest in the shape of increased production; when we remember the vast resources of private wealth in this country seeking profitable investment; and when we remember that, by no less than nine Acts of Parliament, the Legislature has sought to divert that wealth into channels of agricultural improvement, the small result obtained is—to say the least, startling, and suggests the question, Why is it that so few landlords seek to avail themselves of the means provided for improving their estates? The answer to the question is not far to seek.

Land Companies lend at such rates as that interest and sinking fund, to repay the loan in 25 years, amount to about 7 per cent. Now, suppose we take it in the most favourable way for the landlord, and assume that he is able to charge the whole 7 per cent. upon his tenants, then, for 25 years, he is neither gainer nor loser by the transaction. Now, if the borrowing landlord were absolute owner of the estate in question, he might be quite willing to undergo the trouble and expense of contracting such loan and executing such works, in view of an improvement to his estate, the benefit of which, if successful, would accrue to him or his heir 25 years hence. But only a very small portion of the landlords of England are in this position. In nearly every case

where a large estate is concerned, the landlord is a life tenant, unable to move hand or foot without the consent of some other persons; which consent it is frequently difficult, sometimes impossible, to obtain. In such a case, it is only natural that the landlord-occupier should prefer the smaller returns of his estate, in its then condition, rather than risk the actual expense and probable inconvenience of external interference for a benefit which it is scarcely possible he can himself enjoy. But, more than this, if such a landlord were not merely the occupier holding the estate as trustee for his successor, but the actual owner, he might obtain all the advantages of improved agriculture without any of the onerous liabilities or vexatious limitations involved in an application to the Enclosure Commissioners or to a Land Company. He might sell some small portion of the estate, and, by applying the proceeds to the remainder, obtain an immensely-increased rent-roll, and at the same time transfer the portion sold into the hands of a person who, having capital, could raise the estate thus newly carved out into a similarly profitable condition of cultivation. This he is now, except in certain rare cases, unable to do. The position, therefore, of that vast quantity of the land of England which is comprised in settled estates is too often this. The land is craving for capital; capitalists are anxious for an investment; but those who have the land, too often have not the capital, and those who have the capital cannot get the land.

Now, let us ask for one moment to what proportion of the agricultural land of this country the state of things just sketched applies. Since the publication of the New Domesday Book, published in 1875 at the instance of Lord Derby, a mass of statistics have been in the hands of the public which were never before available; and which, full of errors as the book is, have been laid under heavy contribution by all subsequent writers on the Land Question in England.

One result obtained from that compilation is that, speaking in round numbers, four-fifths of the rural soil in England, or more than 52,000,000 acres, is held by about 7,000 persons, not as freeholders, or land*owners*, but as land*lords*—life tenants of entailed estates, subject to all the restraints which may be compendiously described in the one word, entail. Now, what is the real position of a life tenant of such an estate? Suffer me, at this point, to read two short extracts—one from the book of a great conveyancer, the other from the speech of an important landlord. Mr. JOSHUA WILLIAMS thus describes the legal custom of entail: "In families where the estates are kept up from one generation to another, settlements are made every few years for this purpose: thus, in the event of marriage, a life estate merely is given to the husband. Subject to jointure and the payment of agreed sums, for the portions of the daughters and younger sons of the marriage, the eldest son who may be born of the marriage is made by the settlement tenant in tail. By this means, the estate is tied up until some tenant attains the age of twenty-one years, when he is able, with the consent of his father, who is tenant for life, to bar the entail with all the remainders. Dominion is thus again acquired over the property, which dominion is usually exercised in a resettlement on the next generation; and thus the property is preserved in the family."

Lord CARRINGTON last year made the following autobiographical remarks: "Following the advice of my best friends, during my father's lifetime, being twenty-two years of age, I re-entailed the estate. I inherited, eleven years ago, property in Bucks, in Lincolnshire, and in Wales. I found property had been bought in Bucks, and, to pay for that property, the Welsh estate had to be sold, and the money re-invested in the land purchased in Bucks. The farm buildings were so bad on the Welsh property that it

was calculated that the purchaser would have to expend one whole year's rental on them, to put them in decent repair. The River Humber washed away five acres of good land at Winteringham, and formed an island in the bed of the river. As a tenant for life, I could not afford to repel the attacks of the river, or to accept the gifts of the ocean, for I could not charge the estate for permanent improvements, nor could I sell a single acre of the 34 square miles which I inherited. In no way do I wish to introduce the principle that, a living man may not do what he likes with his own. But, though we, properly, respect the rights of the living, ought we not to curtail the power of the dead? There is no reason why a man should not own 2,000,000 acres; but what I do think wrong is, that a landowner should, either by his own act or the deed of his predecessors, be saddled with an enormous tract of country, of which it is impossible for him to get rid of a square yard, however necessary or beneficial the sale of a small portion of it would be to the country, the estate, to his tenants, or to himself. I will try to show what the consequence is. In the north of Bucks I have two strong clay farms on my hands; one I cannot get a bid for. I say to my agent, 'What am I to do?' He answers 'The buildings must be rebuilt, the worst land laid down in grass, the land drained and cleansed, and in two years you may get a tenant.' Very good; but all this ought to have been done years ago and the tenant would have been saved, and the land would never have got into so miserable a condition. But the same millstone is round my neck that hampered my father." Lord Carrington might have gone yet farther, and shown his hearers how, under the existing Land Laws, a settled estate may get into such a condition as did one described by Mr. Shaw Lefevre in his book on the Limitation of Settlements and Entails: "A property of 16,000 acres,

with a rental of as many pounds, was settled upon the Earl of —— for life, with remainder to his son, Lord ——, as tenant in tail. Upon the coming of age of Lord ——, the estate was resettled. In consideration of an annuity of £1,500 per annum, the son agreed to join in the settlement, and to assent to charges which brought up the total encumbrance to £11,500 per annum, leaving a margin of £4,500, out of which the son was to receive £1,500 during the father's lifetime. The son gave up his reversion in tail, and took a life interest in succession to his father, with remainder in tail to his own issue. Within a year from the resettlement, the son, having run in debt for a few thousands, was made bankrupt; the whole of his reversionary life interest was then assigned to the creditors, and the result is, that, during the lives of father and son, and perhaps for many years after, this great estate will be in the position of being in the ostensible possession of men absolutely without means, and without any motive or, probably, power to sell."

These statements, borne out by men like Lord Derby, the late Lord Leicester, Lord Cairns, Lord Selborne, Mr. Walter, the late Mr. Joseph Kay, Mr. Caird, and a countless number of scientific and practical agriculturists, can leave no doubt that the full use and profit of the land of England is not being obtained, owing to the retention of laws which were framed in a different state of society and for other purposes than those which now surround us, and which hamper, by arbitrary restriction, the free employment of individual enterprise. The two points around which these difficulties centre are settlement and transfer. So long as it is permitted to bind up an estate for many years after the settler's death, rendering it impossible to sell any portion of the same for the purpose of improving the residue, both landlord and tenant must remain in an unsatisfactory position. It is sometimes said, indeed, that, with only a few

exceptions, Royal gifts and so on, a power of sale is given in many modern settlements to trustees. But this does not meet the point at issue in any degree. For, first, the power is a limited one in its results, the trustees being bound to expend the money in the purchase of other lands tied in the same bonds of settlement, and, secondly, it is only the trustees who can sell, and never the ostensible owner, however embarrassed he may be, although his own inclination may prompt him so to do, or his unpaid creditors may demand this just satisfaction of their rights. Hence, as the concurrence of all the trustees is requisite, the power, so far as relief to the life tenant or the improvement of the estate goes, is virtually a dead letter. On the first of these two points, I have now sufficiently dwelt.

Let us now briefly consider the second. By some means or other, an estate has got into the market. Let us first assume the case of a capitalist who is desirous of buying the estate *en bloc*. The Lord Chancellor has described, not without a grim humour, the course through which the would-be territorial proprietor has to pass: "You buy an estate at an auction, or you enter into a contract for the purchase of the estate. You are very anxious to get possession of the property you have bought, and the vendor is very anxious to get his money. But do you get possession of the property? On the contrary, you cannot get the estate, nor can the vendor get his money, until after a lapse, sometimes no inconsiderable portion of a man's lifetime, spent in the preparation of abstracts, in the comparison of deeds, in searches for encumbrances, in objections made to the title, in answers to those objections, in disputes which arise upon the answers, in endeavours to cure the defects—not only months, but years, frequently pass in a history of that kind; and I should say that it is an uncommon thing in this country for a purchase of any magnitude to be completed—

completed by possession and payment of the price—in a period, at all events, under twelve months. I pay the expense—the considerable expense—which is incurred in addition to the price which I have paid for an estate, and I obtain a conveyance." At last, then, he has the estate—the title has at length been verified, the bill of costs grumblingly paid, and he is at liberty to enter into his property. But would he at any time raise money on his estate or sell it, the whole cumbrous proceeding must be gone through again, the old deeds again examined, the old requisitions again raised, and answers, and another bill, equally formidable, discharged.

Here the two elements of vexation are the cost and the waste of time. But, for a large estate, some trouble and time may perhaps not be grudged, and, compared with a purchase-money of £40,000, the few hundreds of the lawyer's bill do not seem excessive. But now suppose the purchaser has to buy several small lots, the expense, time, and trouble involved bear a very different ratio to the property from what they did in the case of the large estate. It is an exceedingly common subject of regret among professional men that the cost of land transfer should be so disproportionate to the costs of the property. And yet how can it be otherwise? The cost of transferring a plot of land worth £500 may be £150, and the cost of transferring an estate worth £5,000 may be only £50; but in such a case the trouble involved in transferring the small estate will have been three times greater than the trouble involved in transferring the large one. But in these small transfers the cost is not the main grievance, the delay, the frequent interruptions of business to visit the lawyer, and, when all is done, the responsibility of taking care of a pile of documents which would almost cover the estate they represent, are the obstacles which hinder many small buyers from investing

their capital in the land which so sorely needs such new blood.

The reason of all this difficulty is not far to seek. So long as titles remain in their present lengthy and complex state, no respectable man can venture to allow his client to complete his purchase without a thorough inquiry; and, so long as that title has to be investigated again at every step, that cost and trouble can only increase as the world grows older.

So much for the grievances and mischief caused or permitted to English soil by the existing Land Laws. Let us next see what efforts have as yet been made for their reform, and, lastly, endeavour to collect some hints from the experts on these subjects, out of which we may build a possible scheme of Land Law Reform.

The two main efforts which have been made, in recent times, to secure greater facility of transfer of land are, of course, contained in the Acts which bear the names of Lord Westbury and Lord Cairns, and both which were schemes of registration. Various efforts had, indeed, been made, from the beginning of the 18th century onwards, to establish in some form or other a general registry of deeds, and elaborate schemes had been produced by several eminent solicitors, conveyancing counsel, and other qualified specialists. But, for some reason or other—generally a sudden prorogation of Parliament and change of political parties—these schemes had all proved abortive. At last, in 1862, Lord Westbury secured for his scheme of registration of assurances the dignity of an Act of Parliament. This Act proceeded on a new principle, which has been thus summarized: "The Registrar is to satisfy himself of the accuracy of the description of the land to be registered and its boundaries, after a local inquiry and notices to adjoining owners and occupiers; and he is also to ascertain the title to the land, and what are

the encumbrances upon it. He is then to enter in one Record a description of the land; in another, an exact record of the existing estates, powers, and interests, and the names of the persons who are or may be entitled; and, in a third, the mortgages and encumbrances. The persons mentioned in the Record are to be indefeasibly entitled to the interests therein defined. Every estate or interest created or arising after registration is to be entered in the Record."

The Act was worked for 12 years, and proved a great failure.

In 1875 Lord Cairns passed his Land Transfer Act. This was an effort to solve the problem by a registration of title. The Act, while leaving it free to the landowner to accept its aid, renders all titles once admitted to its rolls irremoveable. Freehold or leasehold land may be registered with an absolute, a qualified, or a possessory title. An accurate description of the land is secured by reference to a public map, but no inquiry into boundaries, as against adjoining owners, is required. Some person is to be registered as the absolute owner of the entire fee simple, or the entire leasehold interest. Partial interests are not registered, but only protected by *caveat;* subject to which restraints, the registered owner has absolute power of sale. Charges are entered in a separate register; the owner of such charge standing in the position of a mortgagee. This Act, as is well known, proved a worse failure than its predecessor.

Now, when we find that men of the genius and experience of Lord Westbury and Lord Cairns, both Chancellors, both enjoying the confidence of Parliament and the country, failed so thoroughly, we may be sure there must be some deep and radical obstacle working against any system of registration of title to land as at present constituted. Until that obstacle is removed, schemes for simplifying the transfer of land by registration of titles

or of deeds, or by any other means, however skilfully elaborated, and with however high credentials recommended, will not be worth the paper on which they are written. The main cause of failure lay in this—that, owing to the great complexity and consequent uncertainty of English titles, the cost and trouble of getting either the deeds upon the register, or a certified title after enquiry by a registrar, was so enormous that, practically, no landowner would brave the ordeal. The evils which those Acts aimed at removing were, first and foremost, that complexity and uncertainty of title itself; second, the burdensome cost of recurring transfers; third, the anxiety and trouble involved in the care of documents on the possession of which the landlord's title to his estate depends. But, if we ask, To what cause is this complexity and uncertainty of title which distinguishes the position of an English landowner from that of any other landowner in the world attributable; we shall find the answer more and more pressed upon us, that the system of entails and settlements is responsible for the evil. In page after page of the evidence given before Parliamentary Committees, by men best qualified to give an opinion upon the subject, we find this reason assigned. Thus the Committee asked of Mr. Follet, the Registrar under Lord Westbury's Act: "Could you explain why the applications under the Act of 1862, pending January 1st, 1870, were not completed, in some cases, until after July 11th, 1877?" To which he replied: "In consequence of requisitions outstanding." Mr. Joshua Williams concluded his remarks by observing: "So long as settlement is allowed in the way that it is allowed, I confess that I do not see that we can have in England a satisfactory registration of title. Mr. Young, a former President of the Incorporated Law Society, said: "The great difficulties which arise are upon settlements in this country. If you could have simply conveyances of

estates, the titles would be very simple; and, even by common conveyancing, you might convey an estate of a large amount for a trifling cost, when you have mere conveyances on the title; but, when you come to have settlements introduced on to the title, with charges and mortgages also, then come the difficulties." Mr. Frere, a solicitor of great experience, stated his belief that no simple, complete, and inexpensive system of registration can be adopted, until the law respecting titles has been simplified by sweeping away all entails, beyond the investment of the reversion of the fee simple in the tenant in tail, on his attaining the age of twenty-one. The evil, however, caused by entails and settlements in title to land is not confined to cases of sale of land; it is also severely felt in cases where the life tenant is anxious to borrow money for the permanent improvement of his estate. What would, in the case of free land, be an easy and cheap affair, because full and intelligible security could at once be given, is, under their influence, converted into a costly and complex proceeding, even in the best cases; but, in the majority of cases, rendered absolutely impossible. Indeed, in the face of all the mischief which the system of entail and settlement, with their associated evil, primogeniture, work, it is difficult to see why they are still retained. They are generally defended, as precautionary safeguards to the family estate against the possible extravagance and injury of an improvident son. But, in the first place, the majority of landowners do not inherit their estates until middle age, nor are they improvident; and, in the next place, they in no way prevent an improvident man squandering his life interest, and so impairing the dignity of the family. It does, therefore, seem somewhat strange that, for the protection of a few worthless persons, the hands of able and honest landowners should be tied in these galling bonds, and that, in obedience to the arbitrary fiat of a dead man,

they should be condemned to see their broad acres unremunerative, and degenerating for want of the application of that capital which, if unrestrained, they might so easily obtain. Nor need it be assumed that the abolition of entail and primogeniture need diminish the size of estates. A man, say, has two sons; the eldest devoted to art or commerce, the second a keen agriculturist and warm sportsman. Under the present system, however anxious he may be to employ his talents in the foreign studio or in the manufacturing town, the eldest son is forced to spend his days in pursuits for which he has neither talents nor interest, while his brother's capacities are no less deprived of their natural sphere, and, for want of occasion, obliged to remain idle. But if the father were free to dispose of his land, without these barricades of entail and settlement, he would leave it to the son whom nature had fitted for such an occupation. That son obtaining his land unfettered, would sell a part, with the proceeds would improve the remainder, draining the wet fields, rebuilding the farm premises, and enriching the soil, so that, in a few years, his income would have doubled itself. The savings might then be invested in other land, in proportion to his working capital, so that, at his death, he would leave an estate, at least, equal in size to that which he had received, but in a condition of high and scientific cultivation, instead of unrepaired decay.

Having now, so far as I can in these narrow limits, endeavoured to show the evils involved in entail and settlement,—evils not counterbalanced by any corresponding advantage,—let me briefly suggest the reforms which I think must be introduced into the law of real property. In the first place, primogeniture, entail, and settlement should for the future be abolished, and property in land be permitted to devolve in the same way as personal property. Having cleared land of these complicating ties, it should be rendered

competent to an embarrassed landlord to sell such part of his land as may be necessary to put him in funds for the proper cultivation of the remainder. That some reform of this nature is required seems to be acknowledged on all hands. At present, a man can only obtain money for carrying out works of permanent improvement by means of an application to the Enclosure Commissioners. Before the loan is granted, considerable preliminary inquiries have to be made by the Commissioners, who must assure themselves that the expenditure will effect a permanent increase of annual value equivalent to the annual charge imposed on the land. If granted, then the improvement must be carried out under their superintendence—an interference often in itself sufficient to prevent the life tenant seeking their assistance. Various remedies have been proposed for this state of things, one being that the trustees of a settlement might be authorized to advance money arising from the sales of the settled estate to the tenant for life for permanent improvements, and to raise money for such loans by mortgage of the inheritance, and, in case of their arbitrary refusal so to act, an appeal should lie to the Enclosure Commissioners. But this would, practically, but little improve the present condition of things, as trustees would usually prefer to shift the responsibility from their own shoulders on to those of the Commissioners, and the evils from which life tenants suffer would only be perpetuated. The real remedy, I think, will be found in the establishment of an Encumbered Estates Court, on the same principles as that which has worked so beneficially in Ireland—a scheme which is daily finding more favour with embarrassed landowners. To this Court either the limited owner, with the concurrence of the heir in tail, might apply, with a view to selling a part of the estate for the benefit and permanent improvement of the rest, or unpaid creditors, whose petition

had been accepted, might have recourse to its assistance; when the life tenant, having satisfied a portion of his just debts by the sacrifice of a small portion of the estate, would continue to enjoy the remainder in freedom, instead of dragging an ever-lengthening chain of mortgages and demands upon his undiminished but useless acres. The entailed and settled properties which come within the jurisdiction of this Court will, by its operation, be made free land, subject to such claims by the reversioners under the settlement as may be proved before its officers. The surplus from the sale, if any, in the case of a sale ordered on the petition of creditors, would be invested for the benefit of the tenant for life and the heir in tail, according to their proportionate rights, under the direction of the Court; while, in the case of a sale at the instance of the tenant for life, the Court would also have power to see that the proceeds were applied to the improvement of the remaining estate. It is difficult to see to what persons such a Court could work injustice, while it would have the great advantage of resting on experience and meeting a real demand of the landowners.

The second reform required is in the question of mortgages. The uncertainty of the position of subsequent mortgagees, owing to the secrecy of the proceedings, the absence of any register resembling that used in mortgages of personal property, the dangerous power of tacking and consolidation, the limited powers of the mortgagee to deal with the property and the vexatious inquiries into his accounts,—all render the obtaining of advances upon real property unduly difficult and costly. To meet these evils, alterations of the existing law might well be introduced, following the lines traced by the President of the Incorporated Law Society in a recent address. The most important of these suggested changes are (1) the establishment of a register, with the consequence that registered mortgages rank before

unregistered and that tacking and consolidation are done away with; (2) that both mortgagor and mortgagee should have full powers, independently of the other, of granting leases, &c., as though they were tenants for life under a modern settlement; and (3) that both mortgagor and mortgagee should have the right to demand a judicial sale without the consent of the other. These reforms could, with advantage, be at once introduced.

The last great reform which, in some shape or other, must come, will be a simplified transfer of land by means of a Court of Registration. That the two attempts of Lord Westbury and Lord Cairns have been failures is no real objection, because the existence of entail and settlement, with all the consequent complexity of title, then barred all real reform; but, in the future, I am assuming that this obstacle has been removed by the prohibition of entails. Then comes the question, shall the new system depend upon registration of deeds or registration of title. The opinions given on this question before the Committee of 1878 displayed every shade of variety. In the first place, we must remember, as Lord Cairns has said, "A register of title has nothing on earth to do with a register of deeds." "A register of deeds," to quote the same authority, "if it is to be worth anything, must be compulsory, and you must have it for the whole country. When you have got it, it will not simplify title in the least. It only puts on a formal record all that multitude of deeds and conveyances, of the extent and complexity of which we have already so much reason to complain. You have to investigate and search just as before. In addition to that, you have to pay for searching in the register, and also to pay, in some shape or other, the expense of putting the deeds upon it." This opinion, of course, assumes that entail and settlement are still retained, and will have to be considerably modified to meet the altered

condition of things which I am assuming. Still, as was truly said by a very eminent solicitor on another occasion, "Title by deed can never be demonstrated as ascertained fact, but can only be presented as an inference more or less probable, deducible from the documentary and other evidence accessible at the time." Whereas, in a system of registration of title, the title passes not upon the execution of a deed, but upon the entry of the record of the title upon the register, or, as was stated by Sir Robert Torrens, in a system of registration of title, although you have a certificate of title, the title does not depend upon that certificate, because that certificate is representative only of the facts in the registrar's books.

It is to be remembered that there are already two countries in which systems of registration of deeds and registration of titles have worked successfully. In America land is conveyed by deed, short and inexpensive; but, in order to be valid, the deed must be registered in the duly-constituted office of the County Court; and the record then becomes notice of the title to all parties. The working of that system is thus summarized in the report of the Royal Commissioners: "The sale and transfer of land in the United States," they say, "are conducted with the same ease as would be the sale of a watch." In Australia, on the other hand, a system of transfer by registration of title prevails, and its working has thus been explained by its author, Sir Robert Torrens: "Land," he says, "is brought under the Act, upon the application of the owner in fee simple. He is obliged to produce his deeds, with an abstract, which is examined by a solicitor appointed by Government for the purpose, and if it is found that a *prima facie* title is made out, and it is proved by application and inquiry that the applicant is actually in possession, then advertisement is made that So-and-so claims to be recognized as owner in fee

of such-and-such lands, and a time is appointed within which persons desiring to oppose his receiving an indefeasible title shall put in their objections; after that advertisement, and no claim arising, then an indefeasible title is given to the applicant, and it is issued in this form: all the deeds are set aside, and a certificate is drawn out stating, upon the face of it all that the land is then liable for, such as jointures, mortgages, leases, and everything of that description; and all the certificates of title are in duplicate. One certificate is given to the owner in fee simple, the other has its place in the register. If the owner should wish to transfer the land, he may attend with the purchaser before the Registrar. Then and there the owner fills in the memorial in the printed form which is on the back of the certificate, and which is simply to this effect—'I ——— in consideration of the sum of £———, transfer to ——— all my estate and interest in the lands described in vol. ——, folio —, of the register book.'"

Now, to either of these systems, two things clearly are requisite, first, property once put upon the register must be irremovable; and, second, the Government Ordnance Survey must be completed; so that, in lieu of the lengthy descriptions which now encumber our deeds, a simple reference to the ordnance map by letter and block may be substituted, with a tracing attached, where necessary, to show the boundaries. The omission from Lord Cairns' Act of any machinery for ascertaining boundaries has been considered by many as one, and not the least important, cause of its failure.

On comparing the two systems of registration of deeds and registration of title, the balance of advantage seems clearly to incline to the latter. With certain limitations, there seems no reason why a scheme drawn on the lines of the Australian practice should not succeed. The objections

usually urged are mainly these—first, it is said there is no real requirement for any change, as the present system works well enough. This objection is sufficiently answered by the evidence of landowners and agriculturists given before various Parliamentary Committees, by the addresses of Presidents of the Incorporated Land Society and other specialist Societies, and, I hope, by the experience of Members of this Institution. Secondly, it is said that any such transfer of the ordinary solicitor's work to a Government office must overwhelm it with business. This objection lies in a misconception. It is not proposed by the advocates of reform that all estates should be at once put on the register. Existing settlements would be respected and only when a transfer takes place would registration be rendered compulsory. Meantime, all voluntary applications for registration would be specially favoured by pecuniary and other facilities; and so, as is believed, the work would be spread over a sufficiently long period to avoid undue friction in the office. Lastly, it is urged that the certainty of a man's title to his estate would be made to depend upon the accuracy of the Registrar. It may, indeed, be well doubted whether one careful examination preceding registration, in which all concerned are most interested in obtaining accuracy, would not be more likely to ensure a good title than the present varying and often incomplete examinations of documents. But, beyond this, the difficulty might be avoided by reducing the area of search for verification of title from a forty years' to a twenty years' period, as it is well known that there is scarcely a single title in England which will not bear the test of such a question. Gradual assimilation of English transfer to Australian is therefore the scheme which, with great hesitation, I think, may be recommended.

For, indeed, it cannot be denied that considerable diffi-

culties must attend the promulgation of any change in our Land Laws which is to be satisfactory and, therefore, final. The traditions of a feudal past, the pride of families, the glamour of great names, the associations of place and time, and the supposed interests of individuals and professions constitute a formidable array of opposition; while the necessarily hesitating attitude of the attacking party, and the technical character of their weapons, offer only too many vantage grounds to their opponents, while they alienate the popular sympathy from their cause. But the acknowledged necessity for some change, and the advantage which the advocates of this particular reform see in its provisions, demand serious consideration for the subject. From a professional point of view, I do not believe that an easy transfer of land will impair the interests of either Surveyors or lawyers. The application of capital to land and the facility of purchase, sale, and charge will soon work for agriculture the same benefits which emancipation from antiquated customs and laws has worked for commerce, literature, and art; and, with free trade in land, the best interests of our professions will be found united. To large estates and small holdings the benefits will be equally extended—the one, free from encumbrances, will be scientifically farmed and remuneratively improved; the other will be eagerly disposed of and eagerly sought.

Public opinion is fixing itself more and more upon this question, and is groping, too often in the dark, for a solution of its difficulties. For, as Mr. Lowe, as he then was, recently said, "the public of England have a joint dormant interest in the land of England." "The case for Parliamentary consideration lies in this, that the improvement of land, in its effect upon the price of food and upon the dwellings of the poor, is a matter of public interest." These were the words of Lord Salisbury, in the report which, with

great care and skill, he drew up. How is that improvement of the land to be effected? This is the question. By releasing it from the mediæval chains in which it is held; by making it a marketable commodity in place of an honorary burden; by conducting to its parched bosom the streams of capital and enterprise. This is the answer I suggest to-night. There is no communism or revolution in the reforms I have sought to foreshadow, for the consequent benefit to the present landlords will be at least equal to the advantage which the country will reap. But in the hasty suggestions of demagogues there may be great danger, and it is the duty, no less than the privilege, of those who, like the Members of this Institution, have practical knowledge of the subject, to guide, by their expression of opinion, the untaught feelings of Englishmen into the paths of just, healthy, and rational reform.

Mr. Edward I'Anson (Vice-President) had great pleasure in moving a vote of thanks to Mr. Freeman for his able Paper. But for the fact that it was an exceedingly pleasant duty to move a vote of thanks, he should not have presumed to do so. The subject-matter of the Paper was of extreme importance, as the wealth of all countries, even of the less fertile, depended in a great measure on the produce of the land. Nations whose history reached back so far as ours, necessarily inherited from past times many customs and prejudices similar to those which formed the subject of criticism in the concluding pages of the Paper, and their existence made this a particularly difficult subject to deal with. The two great principles of entail and primogeniture were closely interwoven with the land system of this country, and had important social and political bearings, which were regarded by many as essential to the national well-being. These and kindred institutions would have to

be swept away before any such changes as had been suggested could be carried into effect.

One thing, however, had struck him in following the Paper, as it had, no doubt, struck many others in the room; he alluded to an observation (on page 10) with reference to mortgages. The author suggested "that both mortgagor and mortgagee should have full powers, each independently of the other, of granting leases," and "that both mortgagor and mortgagee should have the right to demand a judicial sale without the consent of each other." This was, surely, a very sweeping proposition indeed, and would, no doubt, be challenged and contested by subsequent speakers.

Mr. P. D. Tuckett (Member) had great pleasure in seconding the vote of thanks to Mr. Freeman, who had been good enough to bring before the Institution one of the most important questions connected with land, and he thought, with him, that after two Registration Acts had been tried, and after Lord Cairns' late proposals for modifying the law of settlement, those who discussed the admitted evils and proposed remedies could not, on that account, incur the slightest suspicion of entertaining other than the most thoroughly constitutional views with reference to landed property. The question always appeared to him to differ exceedingly, in kind and character, from those other questions of supposed Land Law Reform, which had been the subject of former Papers read at that Institution. The attempts to alter the law as affecting landlords and tenants—whether by the late Hares and Rabbits Bill, or by the suggestion of making the Agricultural Holdings Act compulsory or otherwise—seemed always to be in the direction of further and further restricting the liberty of the owner of land to do as he thought right with his own, or to

make any contract which any other free man thought it to his interest to join in. But here was a suggestion of an opposite description—for greater freedom to deal with the land, on the part of the owner, and to set him more at liberty to make the best use of his own property.

He thought the two things exceedingly different in principle, and, in his judgment, whilst increased information and voluntary effort could do very much in the one direction, history showed that means had almost always been found for evading restrictions imposed on liberty of contract, though at the expense of additional complications, and such legislation could do almost nothing for real improvement. Whereas in the direction now under discussion it did seem that some legislation was really wanted, if our rulers could only hit on the right measure.

The first six pages of Mr. Freeman's Paper contained a spirited *résumé* of much that had been written and spoken by others about the evils of the existing system. It would be easy, and might be amusing, to criticise some of the details of those statements, but he did not wish, on the present occasion, to do so, because he did not think that any experienced Member of that Institution could doubt that there were things connected with present laws of settlement, and of title to real property, that were working evil, and the practical question was whether it was possible to remedy that without producing other evils.

In the latter part of his Paper, Mr. Freeman was not quite, to his mind, so explicit in detail, and so exhaustive as to the proposed remedies as he could have wished, though he could not say his Paper did not clearly state a definite proposal. He had not himself had the advantage of visiting either America or Australia, and he, for one, would have been very glad of a little more detailed information of the working of the systems alluded to, and would also

have been glad to hear a little more of the often quoted system of Registration of the Hanse Towns, and of those of France and other Continental states.

He observed that Mr. Freeman spoke of making property in land devolve in the same way as personal property. That, he supposed, referred merely to the way in which personal property was inherited where there was no will; but he appeared to contemplate maintaining important distinctions in other respects, for he went on to speak of registers of "jointures, mortgages, leases, and everything of that description," and he (Mr. Tuckett) feared that so long as it was attempted to record all these things in the public registers, notwithstanding every simplification, such as Mr. Freeman had suggested, difficulties would be constantly growing up again. The subject was an exceedingly difficult one.

He would be glad, with the permission of the Meeting to bring to the notice of the Institution an idea in connection with that expression "personal property." The great difference between personal property, and landed or real property, was not that one could not by any means tie them up in the same way. On the contrary, if the power of settling real property were in any way restricted, that would be a new distinction made between real and personal property. Those who advocated that restriction, justified it on the ground that the tying up of personal property hurt no one, whereas the tying up land was said to have a bad national effect. Be that as it might be, the real difference was that in the case of personal property trusts and encumbrances were outside the title, whereas in real property they were annexed to the title. In other words, in the case of real property every successive purchaser of even a single acre was compelled to investigate the family history of the former owners of perhaps a large estate, and trace any

change; whereas in the case of registered personal property, all that was required of the purchaser was to see that the registered owner executed the transfer, no matter whether he held as a trustee, or in his own right. On that subject he would, with permission, read a short passage from a Paper written for the Cobden Club by Mr. Wm. Fowler, M.P. for Cambridge, which explained this view with great perspicuity. Mr. Fowler, as many present were aware, had been a conveyancing and equity counsel before he became a distinguished financial authority in the City, so that he was in an exceptionally favourable position for dealing with such questions.

He said: "It is to be observed that though you have no "trouble as to the title of personal estate, which passes by "a process as simple as the delivery of a horse, it is at the "same time possible to make the trusts of personality "almost as complicated and lengthened as those of land. "You cannot make an entail of personality, but you can "make trusts which shall, for all practical purposes, have a "very similar result. It follows, therefore, that it is not "the mere existence of settlements which is the cause of "the distinction here referred to. The real difference is "that with personality the trust is outside the title, and "with land, in very many cases, the trust or entail is a "charge not merely on the trustees, but on the land itself. "If I am a Trustee of Consols, I can transfer them into "another name, and the Bank of England, as keepers of "the register, know nothing, and refuse to know anything "of anyone for whom I may be a trustee. They take my "order for transfer, and they have nothing to do with the "way in which I deal with the proceeds of the stock. But "in the case of land the trust becomes part, as it were, of "the land itself, and there being no register of the title.

" I, as the trustee, cannot transfer without involving my " grantee in seeing what is done with the money, except " where, by the terms of the settlement, a purchaser is " expressly exonerated from all responsibility as to the way " in which the money is disposed of. In the case of large " settlements, this peculiar power is always given to trus- " tees; but, speaking generally, a purchaser of land is " bound to know all that has been done with the land for " the past sixty years, lest, owing to some unexhausted " settlement, or some breach of trust, he should find that " some other person is really entitled to the land and not " himself, or that he has to refund to another the whole " value of the property, which has been improperly conveyed " in fraud, of some other person or persons entitled under a " settlement." Then he went on to say that, if a system of registration such as he suggested were adopted, " such " owner, whether in his own right, or as a trustee for " others, would be able to convey the land absolutely to a " purchaser without any right on the part of any person " whomsoever to dispute the transfer when once completed. " There might be the same power of *distringas* or notice as " now exists in the case of stock, supposing any person inte- " rested in the land to be in fear of fraud, or to desire to " protect partial interests. This plan, or something very " like it, has been long in use on the Continent, and there is " really nothing but prejudice to prevent its adoption here. " What is needed is not a register of the histories, but of " estates, and the names of their owners."

He did not know that he need trouble the Meeting with more, although there were several pages of very forcible argument in support of such a plan. But it seemed to him that unless or until the British public were willing to adopt some such system as that of placing merely the name of the

legal owner of every estate upon the register, and giving him power to convey, that there always must be complication about the title. If such a thing were done, such settlements of estates as were now usual, in common with the settlements of all kinds of personal property, would have to be carried out by means of trusts, and it would be necessary for those interested to see that they had responsible trustees, and if anything went wrong the *cestui que* trust would suffer and not the purchaser and trusts and settlements would still be made very much as before. The great gain would be that the parties really interested would be those who would have to look after them, and not a mere stranger, simply because he happened to buy a bit of land, and that where no such complications existed they would not have to be continually searched for over and over again as a matter of precaution, and the sale and purchase of small portions of land would be immensely stimulated.

He was not so Utopian as to suggest to that Institution that the country was prepared for, or that they were prepared to advocate, such a system as a compulsory and universal system; but there was such a thing as voluntary legislation. Now the difficulties about title, as regarded small portions of land, were found, practically, to be so great that the Land Companies, and, following their example, many other people, selling land in small lots, easily induced vast numbers of purchasers to take small portions of land without any title at all, rather than be at the expense of investigating the title. This occurred round London and the large towns to a very great extent, and the idea that he wished to throw out was this—That it would not be, by any means, a revolutionary scheme, or a very difficult one, now that there was a Land Registry, to enact that any unencumbered owner in fee simple, or any two or

more persons who, together, possessed such an estate in fee simple, should be at liberty to register any definite estate, or piece of land, or house, as having thenceforth acquired in all respects the nature of personal property, so as, thereafter, to be absolutely passed by simple transfer of the registered owner or owners, like any railway stock.

If there were such a power, it would not, of course, in any way affect the old ancestral estates, but he thought it would be made use of with reference to a great deal of suburban and other small property likely to be frequently transferred. It would be an experiment, and if it were found that the change materially added to the market value of such property, if experience taught us it was a good thing, it might spread; but if experience did not show that it was a good thing, no great harm would have been done.

But so long as the proposed registration stopped short of some such logical conclusion, he very much doubted whether partial changes, including the registration of all sorts of incumbrances, would be found of any great benefit. He trusted in making these remarks that it would not for one moment be supposed that if he thought any such change were likely to be prejudicial to the interests of either the landowners of this country, or their legal advisers, he would make such a suggestion, but he believed few people had any conception of the way in which small transactions in land were reduced in number by the present hampering restrictions, and more with reference to the delay and uncertainty, than to the actual cost. He believed that if small portions of land could by some such means be easily transferred, the work to be brought, even to solicitors, would be materially increased, because it would not prevent people continuing to make settlements and trusts, or to borrow money when they wanted it, and it would, he believed, vastly

increase the number of all such transactions. What was wanted from the Legislature, in relation to land, was more freedom of action, and not more restriction.

Mr. P. S. Reid (Member) said that Mr. Freeman having alluded to America and Australia, he might point out that there was this important difference as regarded the tenure of land in those countries as compared with the tenure of land in this country, that both in America and Australia the mines (as was the case also in France) were reserved to the Government. He would go, for an illustration, to a much nearer country—to France—where the facility of transfer of land was something amazing as compared with England. Every transaction was registered, and the transfer from one party to another was effected in a few weeks, and by the expenditure of a very small sum of money. In one case, in which he was concerned, the transfer of an estate of twenty acres only cost 100 francs, whereas the same amount of property would cost £100 to transfer in England. No doubt the subject was loaded with great difficulty by the laws of primogeniture and of entail in this country, but much of this difficulty would be removed by the adoption of a system of registration similar to that which prevailed in France.

Mr. W. J. Beadel (Vice-President) cordially approved of the vote of thanks to Mr. Freeman, who had evidently bestowed great pains upon the preparation of his Paper, but he was bound to say that he entirely disagreed with the greater part of his conclusions.

The author had stated that "Land, like the products of commerce, is a source of national wealth." If, instead of putting the two on a parity, he had said that the land

of this country was the source of national wealth, and that commerce was another and a subordinate source, he would have been much nearer the facts.

This being admitted (as he thought it was admitted) by most persons, it was in the highest degree important that the land should be made to produce the largest possible amount of food for the people.

If it could be shown that this paramount object could not be secured without getting rid of the laws of entail and primogeniture, he would be the first to hold up his hand for their abolition; but were any such changes called for, and were Mr. FREEMAN's allegations borne out by facts? Arguing from comparative results, he thought he would be corroborated by many, in saying, that by far the largest amount of food was produced by settled estates where the law of primogeniture had been in operation for generations. To find land which was out of cultivation, which was starved, unimproved, undrained, and exhausted, one must not go to the hereditary landed estates, but to those the owners of which had probably been unsuccessful in trade, and, having bought land, were wringing the utmost immediate profit from it. For these reasons he ventured to assert, that the abolition of the laws of entail and primogeniture would not tend to improve the cultivation or increase the food production of the land.

To Mr. FREEMAN's question: "Is the land of England in such a condition as to require a different treatment over large areas from what it at present receives?" he answered that there was a large quantity of land which required very different treatment to that which it had received, but whether that treatment would be remunerative to those who administered it was another thing altogether, and he thought it had better remain in its present state than that

the treatment should be applied to it with an erroneous notion as to its value.

The author next asked: "Will those remedial measures be obtained or accelerated by any and what reforms of the existing Land Laws?" He could not go the length of asserting that the Land Laws of this country were not susceptible of improvement, but he was equally unprepared to admit that what Mr. Freeman proposed would better matters in this respect.

But the next paragraph of the Paper was, perhaps, the most startling. "In the first place, I do not suppose that it admits of serious dispute that over millions of acres of exhausted, heavy, or neglected land, an investment of capital, at rates varying from £10 to £30 per acre, is required, in order that such land may let at a reasonable rental."

A more extraordinary statement it would be difficult to meet with, and it was one which should not be allowed to go forth unrefuted. Much as he deplored the present state of the country, he could not believe that millions of acres were in this lamentable condition, but even were it the case he could not believe that the application of fresh capital, amounting to from £10 to £30 an acre, would put it into a marketable state to command a rental, or yield interest on the outlay. Did anyone imagine that an expenditure of, say, the average sum of £20 an acre on impoverished, exhausted, undrained land (which, at 5 per cent. only, means an additional twenty shillings an acre on the rent), would afford a fair return. He would be very happy to sell Mr. Freeman 3,000 acres of clay land on which to spend his £20 an acre to bring it into a proper state of cultivation, and if it yielded him one per cent. for his money he would proclaim him a pioneer of agriculture.

Where there was prospect of remuneration, there was

no difficulty whatever in finding capital, and, if this was the case, there was no need to alter the law.

When agriculture was prosperous, nothing was heard about the abolition of the laws of primogeniture, entails, and settlements, but when it became depressed, these panaceas were persistently held out as means of enabling the occupier of land to hold his own, as though such things could help him. Much greater and more substantial changes than these were needed before the British agriculturist could stand against the competition of the world. That he would ultimately recover himself he was well assured, but it would be by other means than those suggested by Mr. Freeman.

It was a matter of the most vital concern that the land of England should recover its value, and that the occupiers should again be in a position to take farms at reasonable rentals, and support the labourers,—the bone and sinew of the country. When this time would come, or how this happy change was to be effected, he was not prepared to say; but it would not be hastened in any way by the adoption of the means suggested.

Mr. William Fowler (Member) said that he had always had great difficulty in understanding exactly what was meant by the term, the Land Laws, and he thought that a good many people who talked about them were in the same position. The points usually referred to in discussions of this kind were the laws of entail, settlement, and primogeniture, which, to his mind, were the only laws which could be designated Land Laws. The question of registration of title might be left to the lawyers, but, he thought, that it would be a long while before any system of this kind was accepted by the country. He did not think that an owner

would like every time he dealt with his property, or asked a neighbour to grant him a little favour, that all the world should know it, and there were many other objections which did not appear on the face of the suggestion, but would probably reveal themselves in practice.

He entirely agreed with what Mr. Beadel had said with reference to entail and primogeniture, and could not conceive that any advantage would ensue from their abolition. The author, in a great measure cut the ground from under his own feet, by stating that it was competent to the owner of a settled estate to apply to the Enclosure Commissioners for assistance in improving his property.

Mr. C. G. Grey (Member) said that Mr. Beadel had spoken of a class of landlords whom it was a very great satisfaction to a Surveyor to be connected with—the nobility of this country. Their estates, as Mr. Beadel had said, were almost invariably entailed, but there was another class of estates, properties yielding a rental of from £1,000 to £5,000 a year, also entailed, many of which were in a most wretched condition of poverty and neglect, and it was impossible for Surveyors, acting for such owners, to make any improvements on them whatever. Mr. Beadel had stated that he wished all the land of England to produce the most it could possibly yield for the good of the people, but in such cases as he had instanced, there was an obstacle directly in the way of improvement: nothing could be done on account of the entail. The remedy which he suggested was the establishment of a Court, such as the Landed Estates Court in Ireland. It would be for the good of the country, of the tenants, and even of the owner himself, if such an estate, or a large part of it, could be sold to the highest bidder, and the debts cleared off, and any residue invested in the im-

provement of what remained. He had no hesitation in saying, from his experience of the working of the Encumbered Estates Court in Ireland, that such would be the result.

No doubt many expenses had crept in which were not contemplated or intended when that Court was constituted, but he believed that these defects might be remedied without much trouble. He did not know the cause of the increase of costs in transactions under this Court. It was, possibly, attributable to the desire of lawers, acting in these transfers, to go behind the simple register of the Court, though he believed it was not necessary to do so. The facilities afforded by the registration were such, that land sold by the Court brought several more years' purchase than other land.

It had often been stated that lawyers stood in the way of simplification of transfer through a system of registration, imagining that it might diminish their business. He was acquainted with solicitors in Ireland through whose hands many thousand pounds' worth of property had passed, and who had the transferring of large quantities of land in that Court, and he believed that the profits of those gentlemen had been much greater than they would have been under the old system, for the reason that the responsibility of investigating a complicated title was formerly very great, as well as the wear and tear of brain power, and the result was not always satisfactory; moreover if they sent in a large bill the parties often objected. Under the new system the labour was less and the responsibility much lighter, while the result was more satisfactory.

He touched on this point because there were not many Members of the Institution who had had much experience of the working of that Court in Ireland. He thought that

if such a Court were introduced into this country, it would form the beginning of a system of registration, and constitute a tribunal to which a person might go whose estate was not severely encumbered, and sell off the whole or a part of it with very little expense, and those interested in land in the neighbourhood would be able to buy, as they could get an indefeasible title with very little trouble.

Mr. T. Chatfeild Clarke (Member) said that as he might not be present on the next occasion, he wished to express the great pleasure with which he had listened to the Paper. Mr. Freeman was not an agriculturist, and it was possible, therefore, that he had not been quite accurate in his observations upon questions of agricultural profit, and this portion of his Paper had, he thought, been rather roughly criticised.

Of one thing there could be no doubt—that the Land Laws of this country were laws of a past age, derived from feudal times: they compared unfavourably with the Land Laws of foreign states, and were ill adapted to modern requirements. It seemed to him that Mr. Beadel was not strictly logical in contending that property held by life tenants was held on the conditions most favourable for its profitable development. It must be plain that the object of a life tenant would be to save as much as he could out of the property for the benefit of his younger children, and this fact was recognised by every writer and thinker on the question. He would go further, and say it was the plain duty of a man so circumstanced to act in this way, and it was clearly contrary to his policy to sink money in the development of land in which he had so limited an interest and inconsistent with other claims upon him.

As regarded the question of settlement and entail (all

being part of one system), men, who were familiar with the subject, had demonstrated the fact most clearly that a settled estate was an estate often most difficult to deal freely with, and was not unfrequently encumbered to a very large extent, and this being so it would be difficult to convince an unprejudiced observer that the present position of the question was favourable on the whole to the development of the capabilities of the land.

Now, Mr. FREEMAN had not touched in any way on the question of making the land so easily marketable as to call into existence a much larger number of small freeholders. The provisions of the Irish Land Bill addressed to this object were those which seemed to be accepted without demur by politicians of all shades, and he candidly confessed that this was the point to which his mind was largely bent in desiring an alteration of the English Land Laws. Mr. FREEMAN had shown very clearly what changes were needed to give a landowner greater freedom in dealing with his property, among others, the establishment of a system of registration, which would do much to simplify all transactions in land, and this was the direction towards which efforts should be made, though largely dependent on the simplification of the law.

Nothing which Mr. BEADEL had said, had at all shaken his conviction that the land, encumbered as it was at present by life tenancies, settlements, mortgages, and burdens of various kinds, was not in the fittest condition for development, and that the Land Laws were a relic of past ages of legislation, and of a bygone state of society.

THE PRESIDENT said that whether they agreed or not with the views expressed by Mr. FREEMAN, they all felt that he was entitled to their thanks for the

great trouble and labour he had expended in writing the Paper.

The vote of thanks having been put and carried unanimously, the discussion was then adjourned to the next Meeting, on the motion of Mr. WATNEY.

AT

THE ORDINARY GENERAL MEETING,

Held on Monday, May 16th, 1881.

THE PRESIDENT IN THE CHAIR.

The adjourned discussion on the Paper, by Mr. G. M. FREEMAN (Associate), entitled "Land Law Reform," was resumed by

Mr. D. WATNEY (Member), who said that, in criticising Mr. FREEMAN'S Paper, he would not have it thought for a moment that he held there could be no reform in the Land Laws of the United Kingdom, but he hardly considered that the time was ripe for the innovations advocated in the Paper.

The author stated his intention (page 326) of dealing with England exclusively; but, considering what was going on in the House of Commons with reference to Irish land, he (Mr. WATNEY) did not think that the treatment of the subject should be confined to this country alone.

The Land Bill proposed the most sweeping innovations in the Irish Land Laws, and he observed that a Scotch member had given notice that he would move that all properties in Scotland under £20 a year should have the benefit of the reforms contemplated for Ireland. It was but a very small step from Ireland to England. The principle applied to Irish Law must extend (and if the occasion was ripe there it must be ripe here) to Scotland, and finally to England also.

The author seemed to expect that reform of the Land

Laws would be productive of all sorts of agricultural improvements, including increased drainage. Now he ventured to think that no such results would follow any conceivable reform of the kind. Money was at 1½ per cent. and Consols stood at 102, or rather over, and it was only reasonable to suppose that those improvements, if likely to be remunerative, would all be done at the present time. What the land was suffering from was neglect, owing to the decrease of the tenants' resources, and no Act of Parliament, or modification of the law, would put lost capital back into the tenants' pockets. He could only assume that the reforms referred to in the Paper meant an interference with freedom of contract, which would result in greatly depressing the value of land in this country; because, after all, land in England was a luxury. Nothing gave so small a return as land for the capital invested, after payment of legal expenses and ordinary outgoings, and its owners were content with a small interest for their money, in view of the social importance conferred by its possession.

The author seemed to think that the owners would be reconciled to interference with freedom of contract by the improvements which would be effected under a reformed system of Land Laws. He said (page 329) that "In every case where these expensive improvements have been effected, the land has paid a very high interest in the shape of increased production"; but he thought there were many gentlemen present who would bear him out in saying that at the present time the condition of farms on which large sums of money had been spent had seriously deteriorated, and, so far from returning a high rate of interest on the outlay made on them in past years, many of these farms had now to be taken in hand by the landlords, with the necessity for a heavy additional outlay before there was any prospect of letting at all. What capitalist at the present time seeking interest for

his money would care to invest it in a stiff clay farm, when, according to the agent, "the buildings must be rebuilt, the worst laid down in grass, and the land drained and cleansed"? It appeared to be Lord CARRINGTON'S complaint that he could not sell his two farms, and, as he was only a life tenant, must effect all these improvements and farm the land for two years himself before he would have any prospect of getting a tenant. How would it be possible to frame an Act of Parliament which would compel a man to improve his land or to farm it properly? There were probably many life tenants and others who spent large sums of money on improvements, and many absolute owners who did not spend a shilling, and who got all they could out of their tenants; but no law could be passed, without confiscation, which would meet that state of things.

The author had made some startling proposals with regard to mortgages, on page 343. It was quite proper that a register of mortgages should be established similar to those in some other countries in Europe—Sweden, for instance; but what Mr. FREEMAN proposed was, that both mortgagor and mortgagee should have full powers, each independently of the other, to grant leases; so that there would be two parties with absolute power to grant leases. That seemed rather a startling proposition.

Again, Mr. FREEMAN suggested that both mortgagor and mortgagee should have the right to demand a judicial sale. At the present time, a mortgagor could sell his own property, subject to the mortgage; and the mortgagee, if his interest were not paid, had full power to sell under his mortgage deed.

He could not pretend to follow Mr. FREEMAN in the legal part of his Paper, but in one direction a reform seemed to be urgently needed—he alluded to the system of transfer.

If the procedure of purchase could be simplified, and the purchaser could obtain possession without the legal technicalities which now hedged the title round, it would be a step in the right direction. Any Act of Parliament which would give simplicity of title and simplicity of transfer would be one of the greatest possible boons to this country.

Another point to which he would refer was this. There was a Copyhold Enfranchisement Bill before Parliament which, he thought, ought to receive cordial support. Those concerned in copyhold matters knew there was great room for improvement. When the Lord of the Manor required enfranchisement, and a rent-charge is fixed on the estate, it seemed to him that no harm resulted, and it was certainly to the benefit of the country. With regard to the minerals, great discretion ought to be given to the Copyhold Commissioners, or whatever authority was charged with the duty of administering the Act. In the south of England no such question was likely to arise, for the minerals consisted merely of gravel, stone, &c., which were not really minerals, although in the Copyhold Enfranchisement Acts they were so described.

So far as the south of England was concerned, he saw no reason why the minerals should not, in all cases, be enumerated with and form part of the *corpus*. In the north, discretion should be exercised with respect to them, as, otherwise, serious interference with valuable property might result.

He felt that the Institution was under obligations to Mr. Freeman for his Paper, but, personally, he could hardly agree with such sweeping changes as he had suggested.

Mr. J. S. Beale (Associate) felt that to his profession the matter under discussion was one of extreme importance. He did not think that anyone who had considered the system of

Land transfer in England could doubt that it was a scandal to civilization. It was a compliment to call it mediæval; it was a relic of barbarous times which had withstood improvement more completely than anything else that could be instanced.

The distinction to be drawn in discussing this question was between proposals which had for their object simplification of transfer and those which aimed at the limitation of the rights of owners to do what they pleased with their own. The latter he would dismiss with the observation, that he did not in the least agree with the proposal to abolish primogeniture, settlement, or entail. So long as people were desirous of settling their land, they would always find a means of doing so. Primogeniture was a simple nullity, and entail was a complicated form, which might be simplified. The real question was the improvement of the system of transfer.

The author of the Paper had made several suggestions —the establishment of an Encumbered Estates Court; a Register of Mortgages; and a Register of Title. As regarded the first of these suggestions, he did not think that many sales would take place under an Encumbered Estates Court which would not take place without it. It was the question of land registry which covered the whole ground for consideration. Wherever a good system of conveyancing existed, it was founded on some system of registry; without the one, the other was impossible.

Two able lawyers—Lord Westbury and Lord Cairns—had attempted the task, and had failed utterly; the latter, though he had the failure of Lord Westbury to guide him. What was the reason for this failure? He believed it was due, to a great extent, to a disregard of practical considerations—to the fact, that they shaped their legislation to fit the ideas of conveyancing counsel, whose daily work it was to

prepare settlements of large estates throughout the country, and who were not called upon to deal with the multitude of simple cases of conveyances, leases, and mortgages which fell to the share of the rank and file of the profession. The two schemes were based on exceptional transactions, and not on ordinary ones. That was one cause of failure.

Then again. The difficulty of transferring land, as compared, say, with debenture stock, mainly arose from the question of boundaries; and, to meet the difficulty, Lord Westbury proposed local enquiry. It was his (Mr. Beale's) fate, representing a railway company, to be concerned in a case where two adjoining owners attempted to register their estates under Lord Westbury's Act, and in both cases failed; but, before they failed, from mistaking the boundaries, they put his clients to an expense of £6 or £7 in each case.

Another cause of the failure of these Acts was the absence of any inducement to register titles. How were those causes of failure to be remedied? The first thing to do was to abandon the impossible condition—which had been attempted, and could not succeed—of making one Land Registry Office for the whole of England. There must be a registry office at every man's door, so to speak, and it was essential that the registrar of the district should have sufficient local knowledge to enable him to decide questions of boundaries. The parish might be taken as the unit of the registration area in most cases, and in thinly-populated districts the union. Even parishes in towns would form registration districts too large for any one registrar to deal with. An experienced solicitor should be appointed as registrar. With a registry of the kind in each district, the saving of time would be enormous, and transfers could be effected shortly and completely where expedition was desirable. It would be necessary, of course, to confine the registration to the legal ownership, with notice of equitable

interests in some cases. The registered owner, whoever he might be, must in all cases be able to exercise a power of sale and make an absolute title to a purchaser. That was essential in any system of land registry.

Another question was, what inducement to offer to small owners to register their titles. Without some inducement it was vain to hope for the voluntary adoption of a system of registration, and, except in a very few cases, it would be unjust to impose it compulsorily. How, then, could landowners be induced to register? The previous attempts had failed, because they required a certificate of the Conveyancer-General of the Court of Chancery that the title was absolutely good. Anyone who had been unfortunate enough to go through that process knew the infinite trouble and expense attending it. Something less than this was required; and the attempts in both Houses of Parliament to shorten titles by limitation showed that the Legislature shared this view. There must be some system of putting a title on the register, provisionally, it may be, but with less formality than was required by the Court of Chancery. A certificate of investigation from a conveyancing counsel or an experienced solicitor should suffice, accompanied by a declaration that possession had been held in accordance with the title shown. If a man who desired it could get his title on the register without much expense and trouble, one great obstacle was overcome; but something in the way of direct inducement would be needed in the majority of cases. Something might, perhaps, be done in this direction through the agency of the stamp duty. If the stamp duty, which was at present one-half per cent., were reduced to one-quarter per cent. on registered titles, it would be some inducement to registration.

After a time the present duty of one-half per cent. might be doubled on non-registered titles, making it one per cent.

on non-registered, as against one-quarter per cent. on registered, titles. This would act as a decided inducement to get on the register, and, after a few years, the duty might, if necessary, be doubled again. Then there would be no injustice in requiring that any absolute estate passing by will should be registered. That would be legitimate legislation, and would be very rapid in its operation. The real test of the system would be if land became more marketable through facility of transfer and relief from the heavy expense of the present system of conveyancing. Should this prove to be the case, the system of registration, when established, would run by itself, and would not want any assistance.

So much for freehold registry. But this did not, by any means, exhaust the question. Leaseholds still remained to be dealt with, and any system of registry which did not provide for them must necessarily be a failure, because nine-tenths of the property in London and the large towns was held on leases. When a lease, or an authenticated copy of it, was deposited with the registrar, all subsequent dealings with it might be subject to the same system as freehold land. The original lease would show the covenants, and subsequent assignments might be made as easily of leasehold as of freehold interests.

There was a very great difference between a registry of title and a registry of deeds. A registry of deeds had been tried, and was found useless. It added to the cost of small leasehold transactions in land not less than 10 or 15 per cent. in each case, and it was no sort of protection to anybody; therefore the registry must be one of title.

Then as to mortgages. A mortgage was, in form, a transfer of the property. Why not register the mortgagee as the owner, but put notice on the register that the mortgagor was entitled to an equitable interest, which notice would not affect the power of the mortgagee to sell,

but only entitle the mortgagor to a claim upon the proceeds of sale? There were very numerous transactions in equitable mortgages where deeds were deposited for temporary security, and which might equally well be dealt with by such a system, not by registering the mortgagee as absolute owner, but by registering the mortgagor as owner and putting notice of the charge upon the register.

Customary freeholds and copyholds might, he thought, be left to themselves. They had been gradually dying out, and there had been several inducements offered by the Legislature to persuade them to commit suicide as soon as possible. Nothing would help them so much as a cheap and effective system of registry. There was nothing more faulty connected with legal procedure, or which stood more in need of reform, than the system of conveyancing.

Mr. W. Sturge (Past-President) said that the question of the Land Laws was undoubtedly one of the most important that could be brought, not only before that Institution, but the country at large, and it had been pushed to the front by the present state of agriculture. It was always when difficulties arose that remedies were looked for; when all was healthy and prosperous, people were satisfied with things as they were.

The author had drawn a most deplorable picture of the state of the country. He was willing to admit, at the present time, that it was deplorable, but he could not admit that it had been so bad as Mr. Freeman had represented it. At page 326, Mr. Freeman said: "Now, what is the ground for this cry for reform of the Land Laws in England (for it is exclusively with England that we are here concerned), and what reason exists to justify that cry? Land, like the products of commerce, is a source of national wealth; and political economy is entitled to demand that land shall

be so treated as to produce the greatest amount of wealth to the country; with one proviso, namely, the rights of responsible private owners shall be treated with the most inviolable consideration." Land, no doubt, was the principal source of the national wealth of this country, but the doctrine that it was to be looked upon as bound, according to strict views of political economy, to produce the greatest amount of wealth, must be modified in a country like England, where a great number of wealthy people were prepared to devote a large extent of land for the purposes of parks and pleasure-grounds for their enjoyment; and such land certainly did not produce the greatest amount of wealth to the country, and the same remark applied to pasture land.

At the present time, a great breadth of land was being laid down to grass. Now, disregarding the expense of cultivation, arable land, no doubt, produced more than pasture land, and, therefore, more wealth to the country. There was a certain Mr. George Mitchell, who called himself "one who had whistled at the plough," and his great panacea for all our evils was the breaking up all pasture lands and cultivating them with corn. Happily, the nation was not entirely dependent on itself for the production of its food. If it were, food would probably be at famine point at the present time; but, rightly or wrongly, the laws had been so altered that a very large proportion of our food came from other countries. If Mr. Freeman's views were carried out, he must be prepared to go almost as far as Mr. George Mitchell, as he did not quite see where the line was to be drawn.

Another point in Mr. Freeman's Paper which called for some notice, was the statement, that "over millions of acres of exhausted, heavy, or neglected land, an investment of capital, at rates varying from £10 to £30 per acre, is required, in order that such land may let at a reasonable

rental, so far as the landlord is concerned." Now, he had had pretty general experience in various parts of the country, and he did not know where those millions of acres were situated. He was aware that there was a large amount of land which was undrained and which required draining, and that requirement had been particularly developed during these wet seasons; but he was wholly at a loss to know on what ground anything like an expenditure of from £10 to £30 per acre could be made, with any prospect of return to the owner or occupier. The only land on which such an expenditure could be made was woodland, the grubbing, draining, and cultivation of which, he was afraid, at the present time would prove a most unprofitable speculation.

In another passage, Mr. FREEMAN said: "Until this is done, vast areas of land must remain, practically, unlet, and all surface improvements will be useless," and went on to speak of this state of things as having existed for many years past. "On these facts it is quite unnecessary for me to dwell: they are well known to, probably, every Member present, and have been enforced without contradiction for many years past, both by landlords and farmers, by theoretical statesmen, and by practical Surveyors." At the present time, as all were aware, there was a considerable extent of land unlet; but that had been the result of the late wet seasons. Before the cycle of bad years set in, he ventured to say that there were very few acres unlet from one end of the kingdom to the other. He only mentioned these things to show that the state of things was not quite so bad, nor nearly so bad, as Mr. FREEMAN had described it. But, at the same time, there was no doubt that there was a large number of estates in this country which, under present circumstances, could not be developed as they ought to be, and, according to his experience, these estates con-

sisted of two classes: Firstly, a great many estates under entail, where the owners required all the income to live upon and had no money to expend on improvements—a condition of things undesirable at all times, and, under the pressure of present circumstances, almost intolerable; and, secondly, a class of estates which it was extremely difficult to improve; small estates not entailed, but held in fee simple by small proprietors who depended on the income derived from them for maintenance, and could not spare money for investment in improvements. But that showed that it was not only entailed estates that were in this difficulty, but also estates held in fee simple, especially the smaller ones. No doubt, a state of things existed which required a remedy, but it was extremely difficult to say what that remedy ought to be. It was dangerous in these revolutionary times, to go on too fast in altering the old-fashioned institutions of the country; but, at the same time, whilst avoiding too rapid a pace, it would not do to stand still.

Now, in his opinion, the first thing wanted was an Encumbered Estates Court. The owners of a great number of entailed estates, who would be glad to sell them or portions of them, were unable to do so, without going through the somewhat costly and tedious process of the Settled Estates Act, under the Court of Chancery; and some better provision was wanted for the sale of those estates. He thought that the establishment of an Encumbered Estates Court in England would be a great relief to that class of owners, and would liberate a large amount of land for sale by a needy to a wealthy class of persons. If he understood the principle of the Encumbered Estates Court aright, it was that, on a petition from the encumbrancers, and he believed also by a mortgagee, the Court gave power to sell the estate, and all questions of title

were fought, not over the estate, but over the proceeds of it. The Court gave the purchaser an indefeasible title and a short and simple conveyance. He believed that the application of the Encumbered Estates Court to England would be a great relief at the present time. Of course, it might be said that the introduction of such a Court into England was only a remedy, and that prevention was better than cure. What was the complaint which that Act was intended to cure? It was the accumulation of encumbered estates, under the practice of entail and settlement, in the hands of poor tenants for life, unable to develop their resources by the expenditure of money in improvements.

It might be said that the natural conclusion from that argument was, that the entail and settlement of estates must be prevented, and then the remedy of the Encumbered Estates Court would be unnecessary. Granting this in theory, he thought it would be dangerous at the present time suddenly to alter the law of entail.

Now, let it be remembered what these Land Laws were which it was proposed to alter. In the first place, there was the law of primogeniture, which acted in a very few instances—only in cases of intestacy. Certainly, this law did not tend to accumulate entailed estates; because, if a man inherited an estate under primogeniture, he came into it in fee simple. Whatever people's opinions might be as to the law of primogeniture it was certainly not a cause of the creation of these limited interests.

Then, as to the law of entail. What was the law of entail? It was simply a law to prevent unlimited entails; a law that no estate should be entailed for more than 21 years beyond the life of any person now living. So far, the State had stepped in, and said, "You shall not entail estates for ever;" and there was also a provision that a person coming into an estate tail should be at liberty to cut off that

entail. The question now was, whether the State should go a step further and take away the power of entail and settlement altogether. He thought so great an alteration of the law would be open to objection, and that a gradual change would be better. If an Encumbered Estates Court were established, and people found by degrees the advantage of being free from the effects of entail, there would, by-and-bye, be less disposition to entail estates, and entail would become less popular than it now was. People would see the advantage of estates being free, and would gradually get into the habit of leaving their estates to their successors in fee simple. In due course, this change of practice might be followed by a law preventing entail altogether.

He might add that he was no advocate of small estates: he did not believe in the peasant proprietor. He was quite ready to admit that there ought to be some peasant proprietors; but let peasant proprietorship develop itself naturally by the law of political economy. In the county of Somerset, with which he was well acquainted, there were, he believed, more small proprietors than in any other county in England; but this circumstance was not, in his opinion, conducive to improved agriculture; but it did form a connecting link between the labourer and the farmer, which, in a social point of view, was desirable. According to his experience, the best-managed estates, and those which afforded the greatest supply of food and wealth to the country, were those which, whether large or small, were in the hands of people possessed of the means of developing them. He thought that legislation should promote the sale of encumbered estates, and their acquisition by persons who had the power and will to carry out those improvements, without which, increased production could not be attained.

Mr. W. G. Harrison, Q.C. (Associate), said that a good

deal had been said about the Land Laws. What were these Land Laws which people talked about as though they were something very mysterious! The only Land Law he knew in this country was—that a man's land belonged to him. What was the meaning of the word freehold but something which the owner was to have free, and hold it? The only limitation to his rights were self-imposed, when he chose to let his property to another man, on such terms as might be agreed on. The modern notion seemed to be that, although he and his tenant agreed to certain terms, the tenant was not bound to abide by the terms, but the landlord was so bound. He, for one, protested against such a doctrine. The only other Land Law he knew of was that which gave the landlord the right of distress, and rightly so, when he let land to a tenant. There had been some limitation to this law of distress, and certain powers, in other respects, had been given to the landlord; but, beyond these, he knew of no Land Laws.

The Legislature had tried its hand at conveyancing, and had been miserably unsuccessful. It had also tried its hand at registration of deeds and registration of title; but what was the good of registering title, unless the habits and thoughts of the people could be changed by Act of Parliament! When a man had registered his title there still remained the question, "Is he to be allowed to register entails of lands, tenancies for life, and what not?" The same difficulties would continue to exist, for they arose out of the peculiar forms of limitations which every man had a right to impose on what belonged to him. Was there anyone in that room who believed that if limited ownerships were abolished, there would be a single quarter more wheat grown in England than at the present time? Land would produce so much wheat, so much corn, and so much hay; but it was absurd to argue that the question of production

was affected by the way in which the owner chose to create other estates out of his freehold.

The author of the Paper seemed to hold that, if the Legislature stepped in and said to a tenant for life, whose father or grandfather or uncle left him with certain property in an estate, "You have only a life interest in the estate, and you have no right to sell, but we will give you a right to sell," an advantage would be given, and that there would be more corn grown in the country. He was unable to see it, and equally failed to see any advantage to be obtained in that respect by registration of title.

Mr. Sturge had said, and he agreed with him, that what the country was suffering from was bad seasons. The fact was a man could not afford to hold land in this country unless he was rich. If the owner were a poor man, the consequence would be that the land would not be as well worked as it ought to be, and would be, if the owner were a man of means. But, even where this was the case, was it not monstrous, when the owner had done the best he could according to his notions for the interests of his children, for an Encumbered Estates Court to take away the property which he had given to them? It was open to the Legislature to say that, for the future, there should be no entail or settlement of estates; but, where a man had an interest of the kind, it would be utterly unjust to take it away from him.

All who had any knowledge of the country must know that farmers had been beaten by the last two or three seasons, and that the land had had no manure and very little cultivation, because the occupiers could not afford it; but did this constitute a reason for an alteration in the ownership of property and an extinction or curtailment of rights which have been enjoyed for so many centuries? What was wanted was some arrangement by virtue of which, when a

man became poor he might be able at a small expense, to charge his land, going to the Court, and saying, "I am only a tenant for life, and the property is suffering because I cannot expend money which I have not got. It will be for the benefit of those who come after me that the money should be expended; charge it on the estate." This would confer a great and substantial benefit on the country.

He held that a man who had a freehold of his own had the right to do what he liked with it—to let it at the best possible price he could get—even at the risk of being dubbed "a rack-renter." Why should he not rack-rent? Everybody else rack-rented. The shipowner tried to get the best price he could for freight, and the same held good in every other transaction.

Then it was said, "Let the land be capable of being sold cheaply." If any scheme could be devised for cheapening the conveyance of land, it would certainly confer a considerable benefit on the country, without taking away any man's rights.

As regarded primogeniture, a man might lawfully say, "I will not give my land, when I die, to be divided among all my children, because I think it would be a very bad thing for them." The observation of Mr. STURGE, on this head, seemed to him to be absolutely conclusive. Those who desired to have a clear and simple title got it more easily through the law of primogeniture than in any other way; therefore, no good would be done by getting rid of it. We were a people whose laws were made by ourselves. These laws had arisen from the practice and habits of Englishmen for many generations. Why, in the interests of those who were not landowners and had nothing to do with land, was the law to be altered?

Mr. E. P. SQUAREY (Vice-President) thought that

Mr. Freeman was to be complimented on the production of a Paper which had elicited so spirited a discussion. His friend who had just spoken had, he thought, rather overstepped the point to which his arguments were intended to be addressed, for the very fact of the passing of the Act which limited the power to entail and the Acts of Lord Westbury and Lord Cairns dealing with title, indicated that the country was alive to the necessity of something being done with the Land Question. He did not propose to deal with the legal part of the question; but with regard to the remarks which had fallen from Mr. Beale, as to how difficulties relating to title were to be met, it occurred to him that if once a start could be made, say, in the year 1881, with the actual ownership of land, no matter what the nature of the ownership might be—with the fact that some one was in the receipt of the rents and profits, and let that receipt of rent inure for 12 or 15 years, that the practical result would be a substantial basis for a system of registration of the ownership of property. He could not understand why 12 years' absolute possession of land without disturbance, as advocated by Lord Selborne, and without question as to rents, should not give a title on which any document that might be necessary could be founded. It seemed to him that the question of entail, as separated very wisely by Mr. Beale from the question of registration of title, might be looked at from a different point of view from that of the previous speaker. He ventured to think that there were certain very good reasons why entail might be regarded as an undesirable thing for the landowner. A landowner desirous of entailing his property in the ordinary way must trust, not his son, the offspring of the mother whom he had himself chosen for a wife, and over whose education he had strict control, but he must trust his grandson or other remainder man over whose education he had

had no control. Surely, the majority of people would rather trust the son, whom they had educated and brought up according to their own habits and ideas of life, than the grandson or other remainder man over whom they could have very little, if any, influence.

There were many painful cases where an heir to a settled estate raised money on his reversionary interest, because it was known absolutely to those who lent him the money that, if he survived the parent or existing tenant for life, he must come into possession of the rents. Surely, if the power to entail were absolutely withheld, the temptations to extravagance thus held out would be withdrawn. If the owner of an estate had the absolute control of it, and his son happened to have vicious propensities, knowledge that the father had the power to divert the property into whatever channel he liked might be expected to control the actions of the son.

Again, for a young man to know that wealth was certain to come to him, and to believe that nothing could take it from him, and that, whatever his course in life might be, he would ultimately have the ancestral estates, was the very thing, if he had evil inclinations, to sap any good there might be in him. But if, on the other hand, he were told that the ancestral estates would only come to him if he deserved them, and that he would be looked to to maintain the honour and dignity of his family, and hand down the estates again to his son on the same terms that he had received them himself, it would awaken in him a deeper sense of responsibility than any system of entail.

He believed that men might be well educated up to the responsibilities of their position. If a man knew that he was to be trusted with the absolute ownership of an estate, he was unlikely to forget this privilege, and might be expected to fulfil, honourably, his duties to his successors, who would be of his own choice.

He was strongly of opinion that great gain would result to the land by liberating it from the fetters in which it was now held. The whole of the costs that were now incurred in dealing with complicated titles simply meant a tax on the landowner, which would be saved by a simplification of transfer through an effective system of registration, and the mitigation, if not the absolute withholding, of the power to settle.

Mr. A. J. Shepheard (Visitor) said that he differed from Mr. Harrison on some points. He had no greater respect for anyone's opinion than for Mr. Harrison's as to what the law was, but he should hesitate to say the same of his opinion as to what the law should be. Speaking as a solicitor, he would say that anything which could be done to simplify transfer must be to the advantage of his profession. He believed that the freer the trade in the transfer of land the better the business would be; the lawyer would not make so much out of each transaction, but he would be compensated by the multiplication of transactions, and he therefore believed that the best thing to do was to promote the cheapening of the transfer of land.

All seemed to be agreed that something must be done, and this had been his own opinion for a long time past. It seemed to him to be a discredit to the country that the acquisition of land was not easier than it is. The difficulty, however, was not with the lawyers or with the law, but with the people of this country. Landowners did not wish to simplify the transfer of land,—he said it advisedly: on the contrary, their aim was to make it expensive to acquire it, to hold it, and to part with it. Special importance attached to the holder of land, and he, therefore, wished, not unnaturally, to keep the number of landholders as small

as possible. He stood on a sort of pedestal, and he preferred to stand on it.

He contended that no system of registration of deeds or of titles would be of any service until it was compulsory. The two Acts which had been quoted had failed, and for the simple reason, as he believed, that they were not compulsory. It would cost the owner three or four times as much under those Acts to register his title as it would to sell his property; and why should he go to the expense of putting it on the register for the benefit of the future owner? One gentleman he was acquainted with thought it would be a good thing, with the object of dealing with his land for building purposes, to put it on the register; but three or four years afterwards he informed him that he had taken it off again, because it was more trouble to him than before he put it on the register. That was his own experience also. He would like to see title shortened, and saw no reason why ten or twelve years should not give an absolute, indefeasible title against all the world.

It had been said that solicitors should be paid by commission, instead of by six-and-eightpences. He spoke as a solicitor, and he did not believe that, as a body, they were any worse or any better than the rest of mankind; but, if a man were paid by six-and-eightpences, it was but reasonable to suppose that he would work on that basis, while, if he were paid by commission, he would simplify the work as much as possible.

Then, he thought that an Encumbered Estates Court would be cheaper and quicker in its action than the Chancery Courts. As to the abolition of primogeniture and settlements, there was an idea that it was good for the community that the large estates should be sub-divided in some degree and the present system prevented it. He would compel the registra-

tion of titles, and would go so far as to treat land as consols were treated. He would deal simply with the legal holder, and let any arrangement with other parties be made altogether outside the register. Until this was the case, there would be no complete system of registration.

Mr. W. Eve (Member) thought that Mr. Freeman had been rather hardly handled. After making all due allowances, he considered his Paper was a very useful one, and that it embodied views which, in a few years' time, would be practically adopted.

There was such a preponderance of remarks against Mr. Freeman's Paper that, as he held somewhat similar views to Mr. Freeman's, he might, perhaps, occupy a few minutes in expressing them.

He thought that the two subjects branching out of the general question were not kept sufficiently distinct. Firstly, the encouraging, cheapening, and expediting the transfer of land. Secondly, the effect upon agriculture. Mr. Chatfeild Clarke remarked on the last occasion, very pertinently he thought, that it was hard to believe that the present system of entail was the fittest for ensuring the greatest improvement in agriculture. If, as had been stated, the large estates were the best managed, where was the harm in giving to the holders of those large estates who managed them so well the liberty of selling some portion of them for developing the remainder? His idea was that, in order to conserve, it was necessary to concede. He did not believe in trying to uphold everything in the same state it had been in for generations past. It was better to look forward a little and see what was approaching, and endeavour to make improvements to satisfy coming requirements.

No doubt Mr. Freeman had used some large figures,

but he apprehended that there was no one present who would not admit that there were many estates on which a small amount, judiciously expended, would produce satisfactory, though, perhaps, not very large, results. He ventured to think that, on a large quantity of land where £10 an acre were expended, a good deal more might be very beneficially employed.

He could heartily agree with Mr. Freeman's recommendations for doing away with tacking and consolidation. They seemed to him very undesirable and very unfair. He did not see that any alteration of the law as regarded the granting of leases by mortgagors was in the least degree required. It was frequently done now. Power was given to the mortgagor to grant a lease at a minimum rent. He did not see why it should not be done very usually, and saw no advantage to be gained by altering the law in that respect. It would simply amount to this, that, if the mortgagor attempted to grant a lease which the mortgagee did not agree to, he would call in his money, and there was an end of it.

As to Mr. Harrison's remarks to the effect that a man should do what he liked with his land, he (Mr. Eve) always thought there was a great distinction between property in land and in anything else. Land was limited in quantity; it was for the use of the nation at large; and he thought that any law which impeded its development should give way, and, if a proper system of registration could not be carried out without doing away with entail, then do away with entail.

With regard to what Mr. Squarey had said as to registration, his own idea was always to begin with small steps. He had in his mind an estate which he had cut up, on which there had been numerous transactions during the last twelve years, and on each occasion the whole of those trans-

actions had to be investigated; whereas, if, at the time the estate was purchased, a simple title had been registered, then by effluxion of time it would have become an indefeasible title. If the authors of the Registration Acts had begun with more moderate notions, and had not aimed at an indefeasible title to start with, their efforts, would, he thought, have been made much more successful.

Mr. A. Garrard (Associate) thought that all were, probably, agreed that any steps that could be taken to facilitate the transfer of land would be an advantage to the country generally. He had applied to the Secretary of the Estate Exchange to furnish him with the statistics of acres offered and sales effected for the comparatively prosperous year 1877, and for the year 1880, when things were not so flourishing.

The following were the figures:—

	Acres offered.	Acres sold.	Price.
1877	197,537	78,508	£5,750,178
1880	119,991	36,013	£2,335,244

Those were authenticated figures, certified by Mr. Wilson, so that, with better times, it was but reasonable to hope that many of the present difficulties would pass away.

This tended to show that not much difficulty now existed either in acquiring or disposing of land, and, consequently, that no great change was necessary in the existing laws.

Mr. W. T. Scarth (Member) said that his experience was certainly in favour of entailed estates. During the late distressed times, the large estates had weathered the storm much better than the smaller ones. He agreed with Mr. Shepheard that it would be an improvement on the present system to pay legal expenses by commission; but he did not

agree with his statement that landowners were in favour of an expensive system of transfer in order to limit as far as possible the number of proprietors.

He believed, on the contrary, that they would be only too glad to reduce the cost of transactions. He considered perfect freedom of contract between landlord and tenant most desirable, and a liberal compensation to the tenant for any improvements which he effected. The landlords of England had, he believed, done their duty wisely and firmly during these periods of depression, and time, he thought, would demonstrate this most fully.

Mr. Freeman, in reply, said that, however much the speakers in the discussion had differed from each other in their views on this subject, they were unanimous in the extreme kindness with which they had treated him personally, and he begged to thank them for it.

So far as argument was concerned, there was very little to answer, because each speaker, in his turn, had replied to the points taken by his predecessor—a very comfortable arrangement, so far as he was concerned. There were, however, one or two statements which had been inserted in his Paper gratuitously since it was printed. The statements most impugned were not his, but Lord Salisbury's. They referred to a time not particularly marked by agricultural distress, and were contained in a carefully-weighed Report based upon the evidence of men supposed to be specially well informed on these matters.

The chief attacks made on him was by Mr. Beadel, on a former, and by his friend, Mr. Harrison, on the present, occasion. They both accused him of holding deplorable views, and he thought they had both succeeded in painting a picture far more deplorable than any to be found in his Paper.

It had, he thought, been amply demonstrated, in the course of the discussion, that there was an enormous number of estates in this country in a neglected condition, and that the statement (not his own) made some years ago, that there were millions of acres which required a considerable expense to bring them into such a condition as to command a fair rent, was substantially correct.

It was said that entailed estates were better managed than others. The remarks in his Paper did not apply to *all* entailed estates, but to *small* entailed estates; and that his views with reference to the latter were justified had been amply proved by the arguments adduced by Mr. Chatfeild Clarke. It was impossible to deny that the owner of a small entailed estate, who could do nothing with it but keep it in his hands, had a direct inducement to save as much as possible out of it for the benefit of his younger children—in other words, to starve it.

Then it was urged against him that he wished to interfere with freedom of contract. Surely, the object of his Paper was to advocate increased freedom of contract, and to extend the power of dealing with lands on fair and rational conditions. On one point considerable unanimity had been shown—that the cost of conveyancing should be reduced; and one of the strongest arguments in support of this contention was supplied by cases referred to, where properties were broken up into small portions, and the purchasers were willing to dispense with a title sooner than face the costs of conveyance. A good deal had been said as to the registry of conveyances, and the question had been asked how could any one hope to succeed in devising an effective system of registration when the ablest lawyers had attempted the task and failed. But why had they failed? Because of the complicated state of the law, and its unsuitableness to modern times. The time had come when entail might

fairly be swept away, and one of the principal obstacles to a proper system of registration would thus be removed.

Another difficulty was the question of boundaries. A conveyance should be carried out in such a way that the boundary is ascertained and the parcels properly defined. It had no doubt been the fate of many in that room to hear an able counsel vainly endeavouring to get into the minds of the jury what was really meant by "the parcels" referred to in a deed, and the bitter quarrels which constantly took place over questions of the kind were notorious.

One of the speakers had found fault with him because he did not say anything about the peasant proprietor. His answer was that the peasant proprietor had nothing to do with the subject. He had endeavoured to confine himself within the limits of the practical.

One thing which Mr. HARRISON had said had startled him, namely, that the law held that an owner of land had a right to do what he liked with his own. He (Mr. FREEMAN) thought that if there was one thing that a man had not a right to do what he liked with, it was land. If an owner wanted to sell a bit of land and improve the rest, what was the course open to him? He had most tiresome formalities to go through, and if the Enclosure Commissioners authorized a sale he could only reinvest the proceeds in other land. If a man wants to get rid of some other commodity, how would he like ten or twelve men to come and sit round him and ask him a multitude of questions about it. Yet this was what the owner of land had to submit to before he could deal with what Mr. HARRISON called "his own."

Speaking generally, the Members who had spoken seemed to be in favour of greater simplicity of transfer, of abolition of entail, and to be of opinion that it was desirable that the owners of small estates should be able

to raise money on them by a simpler method than was at present possible. There also appeared to be a considerable, though not a general, feeling in favour of the establishment of an Encumbered Estates Court, which might enable an embarrassed landowner to raise money for the general benefit of the estate.

Whether or not he had succeeded in securing approval for the views he had advocated, he felt that his Paper had answered a useful purpose in eliciting so spirited and intelligent a discussion.

The President said that the Members of the Institution were, he felt sure, exceedingly obliged to Mr. Freeman for the trouble he had taken in preparing his Paper, which displayed a good deal of ability. If there were perfect unanimity of opinion, there would be no practical advantage in reading this or any other Paper; and that the author had succeeded in eliciting different views from various Members of the Institution was a matter of satisfaction, as it was only by such means that the truth could be ascertained.

There seemed to be a very general concurrence of opinion that the cheapening of the transfer of land was not only very desirable as a mere matter of expense and trouble, but equally desirable in the interests of the country generally.

The question was how the cheapening of the transfer of land could be accomplished? Mr. James Beale had made a very practical speech, which must have carried conviction to most of those who had listened to it. Mr. Beale was of opinion that the registration of deeds had failed—a fact that was notorious. It did not, however, appear that the registration of titles had failed: on the contrary, he thought there would be a majority of opinion in favour of their registration. This, of course, involved the question of

boundaries, which could only be dealt with by means of accurate maps. Unfortunately maps of the kind were not even in the course of preparation. The Ordnance Map did not—except in the case of a post and rail fence between two pieces of land—show the actual boundary of the property, which was generally the edge of the ditch.

He might mention that he had dealt with this question in a little book which he published twenty-five or thirty years ago, and which was in the Library of the Institution.

It was not disputed that one Central Registration Office for all England was utterly insufficient. Registration by Unions would probably be sufficient, but large towns and parishes, not in the Unions, could be constituted separate registration districts.

It was admitted pretty generally that land in this country possessed a value far above and beyond what was due to its agricultural qualities—a value as a luxury to the possessor; and if freedom of contract were destroyed, *i.e.*, if by any law an owner were prevented from dealing as he liked with his land, its value in this respect would also be destroyed.

Mr. Beale's remarks with reference to inducements to register property reminded him that in the same scheme he suggested that, if a man lent his money on mortgage, and did not register the mortgage, he should have no legal power to claim in the Courts of Law; that there should be notice of registration of title published in the *Gazette*, and that the registration should have legal effect after a given number of years.

He did not think the statement that there were in this country millions of acres of neglected land upon which an expenditure of even £10 an acre would be remunerative had been proved; nor did he think it had been proved that the fact that the land now unlet in this country over a very

large area was due in any way to the state of the Land Laws. The cause must be sought in the succession of bad seasons. No one could farm here or in any other country without good weather.

The Meeting then adjourned.

THE ANNUAL GENERAL MEETING.

Monday, May 30th, 1881.

EDWARD RYDE (PRESIDENT) IN THE CHAIR.

Messrs. C. J. MANN and E. SMYTH having been requested to act as Scrutineers of the ballot for the Election of Council, the balloting list submitted by the Council, in accordance with the Bye-laws, and the record of attendance of the Members of Council were read, and the ballot declared open.

The Report of the Council on the state of the Institution, and the Statement of Receipts and Expenditure for the year 1880, were read.

RESOLVED—"That the Report of the Council and the Balance Sheet be received and approved, and be printed and circulated with the 'Transactions.'"

RESOLVED—"That the thanks of the Institution be given to Messrs. A. GARRARD and R. VIGERS, for the efficient performance of their duties as Auditors, and that they be requested to continue their services for the ensuing year."

RESOLVED—"That the thanks of the Institution are due and be given to the President, the Vice-Presidents, and the other Members and Associates of Council, for the able manner in which they have administered the affairs of the Institution."

RESOLVED—"That the thanks of the Institution be given to Mr. JOHN WORNHAM PENFOLD (the Hon. Secretary), to Mr. JULIAN C. ROGERS, and other Officers of the Institution, for the able manner in which they have executed their several duties.

The ballot having been closed, the Scrutineers reported that the following gentlemen had been elected as Council for the ensuing year:—

President.

EDWARD RYDE.

Vice-Presidents.

THOMAS SMITH-WOOLLEY.	WILLIAM JAMES BEADEL.
EDWARD I'ANSON.	ELIAS PITTS SQUAREY.

Members of Council.

ROBERT COLLIER DRIVER.	DANIEL WATNEY.
FRANCIS VIGERS.	WILLIAM SCARTH.
VIRGOE BUCKLAND.	JAMES MARTIN.
CHARLES JOHN SHOPPEE.	THOMAS BINNIE.
THOMAS CHATFEILD CLARKE.	WILLIAM FOWLER.
CHARLES STEPHENSON.	HENRY JAMES CASTLE.

Associates of Council.

RICHARD BOXALL GRANTHAM.	FREDK. MEADOWS WHITE, Q.C.

RESOLVED—"That the thanks of the Meeting be given to Messrs. C. J. MANN and E. SMYTH, for their services as Scrutineers."

A vote of thanks to the President for his conduct in the Chair having been passed unanimously, the Meeting separated.

THE THIRTEENTH
ANNUAL REPORT OF THE COUNCIL.

Annual General Meeting, May 30th, 1881.

There has been a large addition to the list of Members during the year.

The loss by death and other causes has been, numerically, less than in some previous years, but has in some respects been exceptionally severe. By the lamented death of Mr. Edmund James Smith, the Council have lost a most valued and respected colleague, the Institution a Member devoted to its interests, and the Profession one of its greatest ornaments. As a Member of the Council from the first, and as President for the years 1876-77, and 1877-78, Mr. Smith rendered services to the Institution, the value of which it would be difficult to exaggerate, and which have tended largely to the advancement of its best interests.

The Council also record with regret the loss of a distinguished Associate by the death of Lord Justice Thesiger, who was for some years connected with the Institution, and for a much longer period in constant professional intercourse with Surveyors.

The late Mr. Charles Lee, who has passed away during the year, was one of the oldest and best known Members of the Profession practising in London, and his death and that of Mr. Frederick Beadel, Mr. John Broughton, of South Shields, Mr. Henry Downs, of Basingstoke, Mr. William Henry Heath, of Bishopsgate Street, Mr. David Llewellin, of Pontypool, and Mr. Thomas Colville Scott, will be lamented by a wide circle of friends.

The Institution now numbers 13 Honorary Members, 344 Members, 164 Associates, and 14 Students, or 535 of all classes.

The Balance Sheet and Accounts for the year call for no special comment. The gross income from all sources is

steadily increasing, and a Balance of £768 was carried forward under the various heads of account in respect of the year.

The Balance Sheet for the year ending December 31st, 1880, shows the following results:—

Receipts.	£	s.	d.	Expenditure.	£	s.	d.
Total Revenue . .	2,143	10	8	Total Payments out of Revenue—Current Expenses.	1,608	7	4
Revenue Balance in hand, January 1st, 1880	225	15	8	Transferred to Capital	400	0	0
Entrance Fees and Life Compositions carried to Capital Account . . .	255	3	0	Revenue Balance in hand, December 31st, 1880 .	360	19	0
Bequeathed by the late Mr. H. Crawter	200	0	0	Total Payments out of Capital—Building and Furniture	121	7	0
Transferred from Revenue . . .	400	0	0	Debentures paid off	400	0	0
Capital Balance in hand, January 1st, 1880	6	4	9	Capital Balance in hand, December 31st, 1880 . .	340	0	9
	£3,230	14	1		£3,230	14	1

In addition to the above cash balances, Stock to the amount of £347 3*s*. Consols, and £141 16*s*. 9*d*. New Three per Cents. (of which £100 is invested in the Library Account), stood to the credit of the Trustees of the Institution of Surveyors, on the 31st of December, 1880.

A summary of the Receipts and Expenditure for the present year, up to this date, is as follows:

Receipts.	£	s.	d.	Expenditure.	£	s.	d.
Total Revenue . .	1,287	4	1	Payments out of Revenue—Current Expenses	637	18	9
Revenue Balance in hand, January 1st, 1881	344	2	1	Revenue Balance in hand, May 27th, 1881	993	7	5
Entrance Fees and Life Compositions carried to Capital Account . . .	169	16	0	Payments out of Capital—Building, Repairs, and Furniture	58	13	10
Capital Balance in hand, January 1st, 1881 . .	340	0	9	Invested in North British Railway Preference Stock.	200	0	0
				Capital Balance in hand, May 27th, 1881	251	2	11
	£2,141	2	11		£2,141	2	11

In addition to the above cash balances, the amount of Stock now invested in Consols is £347 3*s.*; in New Three per Cents., £141 16*s.* 9*d.*; and in North British Railway Preference Stock, £200.

The Library balance in hand is £84 2*s.* 6*d.*, in addition to the £100 invested in New Three per Cents.

The total liabilities for rent, rates, printing, and current expenses amount to about £50.

In fulfilment of a long-contemplated intention, the Council appointed a Committee, in November 1879, to "Consider and Report how the objects of the Institution can be best made available for the advancement of Students by examining them in Professional Knowledge."

Many Meetings were held, and great care was bestowed by the Committee upon the duty confided to them, and their Report, when completed, was ordered by the Council to be printed and circulated for the information of Members as a preliminary to its adoption. No pains were spared to make the scheme practical and complete and a sound basis for any future extension of the system.

At the same time the Council deemed that the time had arrived when an endeavour should be made to obtain a Charter of Incorporation, and they felt that their application would receive great support from the fact that the Institution was discharging an important educational duty in connection with the Profession.

For these reasons it was resolved to make concurrent application for the necessary powers by convening a Special General Meeting of Members and Associates.

This Meeting was held on the 23rd of July, 1880, and the following Resolutions were put and carried unanimously:—

Resolved—"That the action of the Council in applying for a Charter of Incorporation be confirmed and approved."

Resolved—"That the scheme of Professional Education prepared and submitted by the Council be confirmed and approved."

Acting upon the powers thus conferred, the Council

requested the Professional Education Committee to prepare and publish working rules for regulating the conduct of the Examinations, and announced that the system would come into immediate operation, and that a Preliminary Examination for Students would be held in the month of January, and a Proficiency Examination for present Students, and for any of the new Students who would otherwise be disqualified by age, in the month of April.

A number of Candidates sent in their names for the Preliminary Examination, of whom six satisfied the Examiner, and received from the Council certificates as Students of the Institution.

It was obvious that the number of Students presenting themselves for the Proficiency Examination in April, being limited to the two classes above referred to, must be small, but the Council thought it undesirable to postpone the Examination for the two or three years which must elapse before the first year's Students completed their course. In the result, one Student, elected in the previous January, applied to be examined under Sub-Class II.; and another (an old Student) under Sub-Class III. The former passed a very creditable and successful examination, and will receive the Institution Prize of £25.

The Papers set at both Examinations have been printed and distributed as a supplement to the current volume of "Transactions," and will be found to embrace very fully the various subjects in the Sub-Classes to which they refer.

A sum of £200 was bequeathed by the late Mr. Henry Crawter (a highly-esteemed Member of the Profession, and for some years on the Council of the Institution), "To be employed in the furtherance of the interests of the Institution in any way the Council might see fit."

It has been determined to devote the interest accruing on the sum to the purposes of Professional Education, in the form of an occasional Prize, to be called the "Crawter Prize," in memory of the donor.

A kind offer by Mr. R. C. Driver of two sums of £25, to be expended in providing additional Prizes in connection

with Proficiency Examinations, has been accepted by the Council.

To give effect to the resolution empowering the Council to apply for a Charter of Incorporation, a Committee of its Members was appointed to prepare a form of Petition and a Draft Charter for submission to the proper authorities. The Committee presented their Report to the Council, who, after due consideration, referred it to Mr. Reilly, the eminent Parliamentary Draughtsman, for final revision. The matter is now before the authorities.

Valuable Papers have been read during the Session by Mr. Francis Turner, Associate, on the Law as affecting Quantity-Surveyors; on the Land Question in 1880, by Mr. Daniel Watney; on Rural Water Supply, by Mr. Joseph Lucas, who has previously made several excellent contributions to the "Transactions;" on Ecclesiastical Dilapidations, by Mr. G. R. Crickmay; on Sanitation, by Mr. H. H. Collins; and on Land Law Reform, by Mr. G. M. Freeman.

Considerable additions by purchase have been made to the Library during the year; but many important works are still needed to complete the topographical collection, and it is hoped that these will be supplied by the liberality of Members.

The Council hope that they may continue to merit and receive from the Members that support hitherto so freely accorded them.

Dr. STATEMENT OF RECEIPTS AND EXPEN

RECEIPTS.

REVEN

1880.	£	s.	d.	£	s.	d.	£
297 Members' Subscriptions for 1880, at £3 3s.	935	11	0				
6 " " in advance for 1881, at £3 3s.	18	18	0				
4 " Arrears, at £3 3s.	12	12	0				
1 " Subscriptions, part paid	2	2	0				
				969	3	0	
141 Associates' Subscriptions for 1880, at £2 2s.	296	2	0				
3 " " in advance for 1881, at £2 2s.	6	6	0				
3 " Arrears, at £2 2s.	6	6	0				
				308	14	0	
5 Students' Subscriptions for 1880, at £1 1s.	5	5	0				
1 " Arrears, at £1 1s.	1	1	0				
				6	6	0	
							1,284
Hire of Arbitration Rooms							847
Dividends							11
Cash in hands of Treasurer and Secretary, January 1st, 1880							225
							£2,369

CAPIT

	£	s.	d.	£	s.	d.	£
16 New Members' Entrance Fees for 1880, at £5 5s.	84	0	0				
5 Members' Entrance Fees, Balance on Transfer, at £2 2s.	10	10	0				
1 Member's Life Composition Fee	31	10	0				
				126	0	0	
21 New Associates' Entrance Fees, at £3 3s.	66	3	0				
3 Associates' Life Composition Fees, at £21	63	0	0				
				129	3	0	
							255
Bequeathed by the late Mr. Henry Crawter							200
Cash transferred from Revenue							400
Balance in hands of Treasurer, January 1st, 1880							6
							£861

LIBRA

	£
Donations, 1880	37
Dividends	2
Balance in hands of Treasurer, January 1st, 1880	147
	£188

SU

	£
Revenue Account	2,369
Capital "	861
Library "	188
	£3,418

ASSETS AN

	£
Cash in hands of Treasurer and Secretary	768
Value of Furniture and Books	2,474
Invested in New Three per Cents. and Consols	375
" " " " Library	100
Subscriptions and Entrance Fees due, but unpaid at date	100
Value of Premises, No. 12, Great George Street	6,000
Fees for use of Rooms due, but unpaid at date	158
Bequest from the late Mr. Henry Crawter. Since invested	200
	£10,176

SURVEYORS.

THE YEAR ENDING DECEMBER 31ST, 1880. Cr.

CCOUNT. EXPENDITURE.

1880.	£ s. d.	£ s. d.
t	244 15 10	
rance, Rates, and Taxes	91 19 1	
l, Light, and Water	58 13 4	
		395 8 3
rest on Loans	.. ..	21 8 6
airs	.. ..	60 11 3
ionery, Postage, and Receipt Stamps, Books of Account, Publications, &c. ..	.. ..	83 4 5
aries and Wages	.. ..	662 9 7
sehold Effects and Housekeeper's Petty Cash Expenses, Tea, Coffee, and Sundry Disbursements		64 7 5
lication of "Transactions"—Printing and Lithography	248 9 0	
Covers and Binding	3 12 10	
Reporting	37 16 0	
	289 17 10	
Less Sale of ditto	29 17 11	
		259 19 11
eral Printing	.. ..	60 18 0
nsferred to Capital for Furniture and Redemption of Bonds	.. ..	400 0 0
h in hands of Secretary	20 0 0	
„ „ Treasurer	340 19 0	
		360 19 0
		£2,369 6 4

CCOUNT.

	£ s. d.
niture and Fittings	77 17 0
lding	43 10 0
lemption of Bonds	400 0 0
ance in hands of Treasurer	340 0 9
	£861 7 9

CCOUNT.

	£ s. d.
chase of Books, Maps, &c.	120 11 7
ance in hands of Treasurer	67 9 10
	£188 1 5

ARY.

	£ s. d.
venue	2,008 7 4
ital	521 7 0
rary	120 11 7
ance in hands of Treasurer and Secretary	768 9 7
	£3,418 15 6

IABILITIES.

	£ s. d.
e Quarter's Rent to Christmas 1880	62 10 0
el, Housekeeping, Printing, and various Accounts	171 2 4
ance	9,943 7 5

Examined with the Books and Vouchers, and found correct.

ARTHUR GARRARD.
ROBERT VIGERS.

19*th May*, 1881.

£10,176 19 9

APPENDIX TO VOL. XIII.

Obituary.

FREDERICK BEADEL (Member) was born at Witham, Essex, in the year 1830. He was the second son of the late James Beadel, head of the firm of Beadel and Sons, of Gresham Street. In early life he was in the office of Sir William Tite, with whom he served his articles. In the year 1851 he joined his late father's firm in conjunction with his elder brother, Mr. William James Beadel (Vice-President), the head of the present firm. His practice was principally confined to dealing with property in London and the suburbs, and his reputation as a man of experience and judgment stood very high.

He was one of the earliest Members of the Institution, and died, after a long and painful illness, in the 52nd year of his age.

JOHN BROUGHTON (Member), a son of Mr. Thomas Broughton, of Peterborough, was born in March 1824. He studied in early life for the legal profession, but abandoned his intention, and in 1824 went to Ceylon, and became a coffee-planter, acquiring considerable property. On his return to England in 1853, he married a daughter of Mr. Andrew Stoddart, of South Shields, whom he joined as local representative of the estates of the Dean and Chapter of Durham. After the death of his father-in-law, he became the sole agent for the immense estates of the Dean and Chapter, and for the ten years previous to his death was the

local representative of the Ecclesiastical Commissioners under the late Mr. E. J. Smith. Mr. Broughton was Mayor of South Shields, from November 1874 to November 1876, and was a Justice of the Peace for the Borough.

Mr. Broughton became a Member of the Institution in December 1874, and remained so until his death.

WILLIAM HENRY HEATH was born on 4th November, 1833, at 122, Bishopsgate Street Without, where his father, for many years, carried on the business of a Contractor. He was educated at the Christopher House School, Finsbury Square, and was articled to Mr. Michael Meredith, of Great Winchester Street, Surveyor, under whom he acquired a thorough knowledge of his profession, being engaged on the Royal Exchange, Sun Fire Insurance Office, and other important works. On the retirement of Mr. Meredith, in 1854, Mr. Heath succeeded him in practice, which he carried on with considerable success to the time of his death, which took place 5th March, 1880. He was employed on many important railway and other engineering works, in which he acquired the confidence and respect of the engineers and contractors, and of all with whom he was engaged. On commencing practice he was appointed to succeed his old employer as Surveyor to the estates of Bishopsgate Parish, his native locality, and in the affairs of which he always took a lively interest. He leaves a large family and numerous friends to regret his loss.

CHARLES LEE (Member) was left an orphan in early life by the premature death of his father, an Officer in the King's Own, who died from wounds received in the Peninsular War. He was brought up by his uncle, Mr. Williams, a Surveyor of the old school, practising at Islington, and, being desirous of qualifying himself as an

Architect also, was placed to learn the practical part of that profession with Mr. Thomas Cubitt, the well-known Builder of Belgravia. Two or three years later, he entered the office of Mr. John Nash, the Government Architect of the day, and by steady application to business soon gained a good position in the office. While with Mr. Nash, he took an active part in carrying out the great improvements then going on at the West-End, in the construction of Regent Street, the demolition of the King's Mews at Charing Cross, and the formation of Trafalgar Square; also in the laying out of the Regent's Park, and the supervision of the erection of many of the buildings surrounding it, having for his fellow-clerks the late Sir James Pennethorne, Mr. Mathieson, Government Architect for Scotland, and other well-known men. On Mr. Nash's retirement, Mr. Lee became associated with the late Mr. Morgan, who succeeded to a part of Mr. Nash's practice, and with him was concerned in the construction of the Regent's Canal, and in preparing the designs and superintending the erection of the Haymarket Theatre. Mr. Lee subsequently entered into partnership with Mr. Duesbury, and with him carried out the erection of the Derby Town Hall and Lunatic Asylum, as well as several churches and schools. After Mr. Duesbury's retirement, Mr. Lee took into partnership, in architectural matters, the late Mr. Thomas Talbot Bury. On the dissolution of their partnership he practised for some years alone, but for the last sixteen years of his life the names of Mr. Lee's sons with that of Mr. William Pain were associated with his own under the style of Lee, Sons & Pain. The re-building of Her Majesty's Theatre after the recent fire, may be mentioned as an illustration of Mr. Lee's practice as an architect. In 1845, when the railway mania was at its height, Mr. Lee was active in getting up surveys for some of the proposed schemes, doing, personally,

a great deal of the field-work, and being afterwards concerned in the purchase of properties required for some of the schemes sanctioned by Parliament. From that time until within the last four or five years, Mr. Lee may be said to have been engaged in most of the important rating or compensation cases which have occurred in the Metropolis and neighbourhood, and in the valuation of large public undertakings for rating purposes in every part of England. He valued with this object, on two or three occasions, the entire Parishes of St. James', Westminster; St. George, Hanover Square; Lambeth, Battersea, Wandsworth, Putney, Wimbledon, and Fulham. In 1848 he acted on behalf of some of the large landowners when the Richmond Railway from Waterloo Station was in progress, and continued to represent their interests afterwards in all matters connected with their estates. He also acted on the part of the Government in the important cases arising out of the defence works at Portsmouth, Plymouth, and Sheerness, and arranged the sale and letting of the old Grand Junction Waterworks' Reservoir, now the site of the Great Western Railway Terminus and Norfolk Square. In the year 1853 he valued for re-assessment the whole of the property supplied by the New River Company. He was engaged in the compensation cases connected with the formation of Battersea Park, and the South-Western Extension from Nine Elms to Waterloo. He laid out the Copenhagen Estate at Holloway, and sold part of it to the City for the New Cattle Market. He acted as Surveyor to Earl Spencer, lord of the Manor of Wimbledon (including Putney and Wandsworth) and the Manor of Battersea His knowledge of Copyhold Law was exceptional, and for the last 30 years of his practice he was much engaged in valuing such properties for fines or enfranchisement.

Mr. Lee was a man of excellent ability, and was

endowed with great powers of memory and singular tenacity of purpose. He was genial and kindly towards those with whom he was intimate. The power of sticking closely to his professional work was the main cause of his success in life.

Mr. Lee died, after an illness of four years' duration, on the 28th of August, 1880, in the 76th year of his age.

DAVID LLEWELLIN (Member) was a son of the late Mr. David Llewellin, of Gold Tops, Newport, Monmouthshire, and succeeded his brother, the late Mr. William Llewellin, who died in 1864, in the business founded by his uncle, the late Mr. William Llewellin, of Pontypool. He was largely concerned with the management of mineral property in South Wales, and earned a very high reputation for candour and integrity. He was an active member of various local organizations, in which he took great interest. He had been seriously unwell for some months before his death, and removed to Hastings in the vain hope of recruiting his health. His death took place very unexpectedly soon after his return from the sea-side, on the 29th of August, 1880, in the 54th year of his age.

THOMAS COLVILLE SCOTT (Member) was born in Forfarshire, and was a younger son of the late Robert Scott, Esq., of Seaforth, Arbroath, and was engaged in practice for many years as an Estate Agent, Surveyor, and Drainage Engineer. Before establishing himself in London, he acted successively as Resident Agent to Lord De Tabley, the Duke of Argyll, and the late Mr. Joseph Neeld, M.P., in Wiltshire. Mr. Scott had decided literary proclivities. He will probably be remembered best for his vigorous contributions to contemporary literature on the subject of sewage utilization, and his endeavours to establish

a standard of average production per acre for Great Britain. Mr. Scott had large acquaintance with, and took a deep interest in, the condition of Ireland, where he acted for some years as Agent and Receiver on the Audley Estates, in the County of Cork, which he entirely re-modelled and re-arranged. He was a Director and one of the leading spirits of the Royal Agricultural Benevolent Association, joining the late Mr. Alderman Mechi in organizing that useful Charity. At the request of the National Rifle Association, Mr. Scott undertook the preparation of Wimbledon Common by draining it, laying out the roads, erecting butts, &c., for the opening by the Queen in July 1860. Mr. Scott's death took place on the 11th of March, 1881, in the 62nd year of his age.

EDMUND JAMES SMITH (Past-President), was born at London, in the year 1817. When about 16 years of age he was articled to the late Mr. James Alexander, of Doncaster. On leaving him, he entered the office of Mr. Richard Hall (then of Cirencester, since of Great George Street, Westminster), with whom he remained as a paid assistant for upwards of five years. It was in Mr. Hall's office that he laid the foundation of the wide and varied experience which led him by sure steps to the position he subsequently attained, and to which he was in the habit of saying he had resolved to attain.

The circumstances of the time offered unexampled opportunities to a young man of talent. The country, crippled and, at times, almost strangled by chronic war with France, was beginning, after 10 years of peace, to turn its reviving energies to projects of internal legislation. The Tithe Act, passed in 1835, and the Common Fields' Enclosure Act, in the following year, were the first-fruits of the newly-awakened spirit of domestic reform, and with the almost simultaneous

development of the railway system, opened up an immense and varied field of employment for the Surveyor, who became, as it were, the "handy man" of professional life.

A large share of the new business found its way to Mr. Hall's office, and had to be got through under conditions of pressure which gave early maturity to the powers of rapid and effective action which Mr. Smith possessed.

About the year 1840 he left Cirencester and came up to London, and was engaged in the office of Messrs. Clutton, of 9, Whitehall Place. Here he acquired that special knowledge of the management of the Church property which subsequently led to a partnership with the late Mr. John Pickering, at that time one of the Surveyors to the Ecclesiastical Commissioners. In this position his mastery of principle (he was always somewhat scornful of detail), and powers of luminous exposition were soon afforded an opportunity for their conspicuous display.

Shortly after Mr. Smith entered into partnership with Mr. Pickering, a Royal Commission, of which the present Earl of Harrowby and the late Sir John Lefevre were the most prominent members, was issued to report on the best method of dealing with the property, belonging to Bishops and Chapters, subject to beneficial leases.

The Report of this—the Episcopal and Capitular Revenues—Commission recommended that fixity of tenure should be given to the lessees by making their leases perpetually renewable, in consideration of the estates being saddled with annual payments to the Ecclesiastical Corporations, equal to 33 per cent. of the annual value.

A lengthy Bill to carry out this proposed arrangement, under the direction of a New Central Board, was introduced into the House of Lords, in the Session of 1851, by the Earl of Carlisle, acting for H.M. Government.

The Bill was referred to a Select Committee, before which Committee Mr. Smith appeared as the first witness. In the interests of the Church, and also of the lessees and of the country in general, he deprecated the passing of the proposed measure, and advised the substitution of a system of general enfranchisement by way of sale or exchange on the one hand, and purchase on the other; the option, as to sale, to be in the Church, and the transactions to be effected under the sanction of the three Church Estates Commissioners, who in 1850 had been added to the Ecclesiastical Commission, as its working and responsible Committee of Management.

Mr. Smith's evidence before this Committee may still be read with interest and profit, as an effective exemplification of the principles of value.

There were many other occasions on which Mr. Smith would have been welcomed as a Parliamentary witness, but he shrank, with characteristic caution, from association with enquiries which his sagacity forewarned him would probably be abortive.

The Report of the Lords' Committee was adverse to the Government Bill, but it was not merely negative. It contained certain specific recommendations, mainly based on the suggestions made to the Committee by Mr. Smith; and when, towards the close of the Session, the Government withdrew their first Bill, the new Bill introduced in its place was founded on these recommendations. The new Bill, after considerable opposition from the lessees of Church property, became law in August 1851, under the title of "The Episcopal and Capitular Estates Management Act," 14 & 15 Vict., c. 104. Mr. Smith had, subsequently, the satisfaction of hearing from Sir John (then Mr.) Lefevre that the evidence given had convinced him that the scheme put forward by the Episcopal and Capitular Revenues

Commission, for which he was responsible, was less advantageous than that advocated by Mr. Smith.

The measure was a temporary one, being limited to three years; but it has been continuously renewed, with some amendments in points of detail. Under it, the agreements for enfranchisements were voluntary, and the Church Estates Commissioners—viz., the Earl of Chichester, the late Right Hon. Henry Goulburn, M.P., and the late Mr. (afterwards Sir) John S. Shaw Lefevre, K.C.B., who used *ad hoc* the staff of the Ecclesiastical Commission— were the parties who superintended the working of the law.

From the commencement of the operations under the Episcopal and Capitular Estates Management Acts, Mr. Smith attended the Meetings of the Church Estates Commissioners, held in conjunction with the Meetings of the Estates Committee of the Ecclesiastical Commission, and on all matters relating to or connected with sales, purchases, or with the management of estates by both Boards, Mr. Smith was looked to for oral advice in addition to that contained in his written Reports as the Commissioners' Surveyor. For this prolonged weekly attendance in the Commissioners' Board Room, he received no remuneration whatever.

The only person who continued to hold the office of Church Estates Commissioner, from the year 1850 until the year 1878, was the present Earl of Chichester; and it may be stated with confidence that there were few, if any, of the many difficult matters on which Lord Chichester had to exercise his judgment, that he did not make it a point to ascertain previously the opinion of Mr. Smith, of whose soundness of judgment and zeal for Church interests his Lordship is known to have entertained the highest opinion.

The firm of Pickering and Smith underwent several

modifications. On Mr. Pickering's retirement, Mr. Smith for some time carried on the business alone, but subsequently took the late Mr. Watkins into partnership, and after the death of that gentleman, his son, Mr. Charles John Smith, and his son-in-law, Mr. Spencer Gore, under the style of Smiths and Gore.

In the year 1872, Mr. Smith was appointed by Mr. Gladstone Crown Receiver for eight Counties in the North of England, for which district he acted as Surveyor to the Ecclesiastical Commissioners, and it was to this part of the country that Mr. Smith's public reputation was mainly confined, till the closing events of his life brought his name into general prominence. His familiarity with the resources of the mineral districts (the result of observation and a considerable practical acquaintance with geology and metallurgical science) led to his frequent selection as sole arbitrator to settle matters involving very large pecuniary interests.

In 1872, he was instructed by the Lords of the Treasury to report upon the Northern Estates of Greenwich Hospital. He continued for several years to advise on their management, and it was on his recommendation that part of the estates was recently sold by Mr. Driver.

The high estimate of his powers entertained in official circles was evidenced by his selection, in 1876, by the then Home Secretary, to act as sole Commissioner to settle the vexed question of the Halifax Church Rate—a duty of the most delicate and difficult kind. The amicable adjustment of a dispute which had for many years disturbed the relations of vicar and parishioners, proved the wisdom of Mr. Cross's choice.

In 1877, Mr. Smith was again appointed sole Commissioner to endeavour to arrange with the Municipal Authorities of Glasgow the adjustment of the debt affecting

the public roads of the Counties of Lanark and Renfrew. No less than nine Bills relating to the matter had been previously introduced into Parliament, all of which failed to pass. After a protracted local enquiry, during which his patience and powers of sustained attention were displayed to the full, he succeeded in concluding an arrangement which forms the basis of the present Scotch Roads and Bridges Act.

Notwithstanding the demands upon his energies during the last busy years of his life, Mr. Smith was always ready to devote time and trouble to the affairs of this Institution, of which he was an ardent supporter from the first.

His two years' tenure of the Presidency, and the manner in which he discharged the duties of the office, is fresh in the recollection of every Member of the Institution. He was warmly in favour of the adoption of the scheme of Professional Education, and had no small share in its origination. Here, as elsewhere, he rendered powerful but unobtrusive aid, known only to those who were closely associated with him, and were accustomed to resort to him for counsel.

The fact that Mr. Smith was (except in official circles) much less widely known in the south than in the north of England, explains the measure of surprise excited by his appointment to negotiate the provisional agreements for the purchase of the interests of the London Water Companies. As a matter of fact, there was probably no man in England who united in so eminent a degree the qualities of a first-rate negotiator, and those who committed the task to his hands, knew that he would do all that it was possible to do under the circumstances.

Negotiations with the Water Companies were opened by Mr. Smith in August 1879, and progressed so rapidly in his vigorous hands that he was able, five months afterwards,

to report that the last of the agreements had been signed. The announcement of the terms of purchase was followed by a heated controversy. What was unfriendly to the scheme owed the greater part of its acrimony to the impending dissolution of Parliament, and the exigencies of party warfare. Much of the criticism which the scheme evoked was both able and sincere, and its author defended it with his known dialectical skill. Much on the other hand was rooted in sheer ignorance, and Mr. Smith was not the man to deprive dullness of its consolations by dispelling its illusions.

The scheme was simplicity itself. Its author hit upon an ingenious expedient for dispensing with the raising of the huge capital which would be required for the purchase in the ordinary way. He proposed to allot to each shareholder as much of a New Water Stock as, at a fixed rate of $3\frac{1}{2}$ per cent. would secure him the same income as he derived from his shares at the price current at a date defined in the agreement. To meet the shareholders' claim to participation in prospective profits, the scheme divided the New Stock into two categories, Original and Deferred, the former bearing interest from the date of conversion, the latter carrying no interest till merged into the original stock, at various periods, extending over twelve years. According to Mr. Smith's calculations, at the end of the above periods, when these increments ceased, the public would have acquired, without raising a farthing of capital, the whole of the Companies' undertakings, in exchange for the payment of a fixed annual sum to the former shareholders, and would be in possession of a large surplus income, due to increase of population and consolidation of management.

If genius be, as it is said to be, a capacity for taking infinite pains, the aphorism was well illustrated in the case of Mr. Smith. So completely and rapidly did he master

every condition of the complex problem that he was able to hold his own against the pick of the Parliamentary Bar, before a not too friendly tribunal, during an examination which extended over seven days. How deeply he impressed those most capable of estimating the weight of his evidence is best illustrated by the remarkable eulogium which it drew from an eminent advocate not too prone to gratuitous praises :—"This gentleman has been studying this question for a long time. He has gone into the geology of the question; into the law of back dividends; into the quality of the water, and other sanitary matters; into the history of the Middlesbrough and Stockton case; and any one who has heard his evidence, if he has had a Parliamentary experience such as I have had, will, I am sure, concur with me in saying that there has never been an exhibition of such masterly calculation in any of these rooms for thirty-six years."

The enormous strain, however, severely taxed his physical powers, tried as they had been by six months of exhausting preparatory labour, but no one suspected that his career was so near its close. Till within a few days of his death there was nothing to indicate the existence of the obscure malady which proved so suddenly fatal. He was actually arranging appointments for the following day, when what appeared to be mere indisposition all at once took a grave turn, and pyæmia developed itself so rapidly that he expired on the morning of the following day, Wednesday, the 21st of July, 1880. He was buried at Kensal Green on Saturday, the 24th July, amid every circumstance of respect, in the presence of numerous relatives and a large concourse of personal and official friends.

Mr. Smith was a Fellow of the Geological Society, a Member of the Northern Institute of Mining Engineers, and an Associate of the Institute of Civil Engineers.

It would be almost impossible to convey to a stranger an adequate notion of this singularly able man. Those who knew him will perhaps best remember him by the remarkable clearness and readiness of his mind. But his reputation was probably traceable quite as much to the balance as to the quality of his powers. His memory seldom failed him, and the keenness of his perception often enabled him to startle people with remarks suggesting foreknowledge of what they were about to say. He delighted to disconcert a person who bored him, by suddenly breaking in upon his story, and dismissing him with some pleasant paradox, which meant something or nothing according to the intelligence of the person to whom it was addressed.

The impediment of speech from which he suffered was often employed most adroitly. It made him a master of synonyms, and the frequent verbal substitutions which it necessitated gave a curious epigrammatic point to his remarks. He had a habit (which those who knew him will recall) of reciting observations referring to matters on which his judgment was in momentary suspense, in a sort of steady monotone, gradually falling into a natural key as his views took shape. His pen was the ready servant of his mind, and never betrayed him into incautious or inexact expressions where caution and exactness were necessary. He possessed to perfection the art of so arranging his matter as to present it in the most favourable form; but the extreme condensation of his sentences often impaired their harmony, though never their sense.

His power of summarizing scattered facts was remarkable, his practical mind frequently discerning clues which escaped the notice of others. He possessed, in short, that combination of faculties which constitutes a dominant mind, with an unusually small share of the weaknesses so often associated with exceptional powers.

There can be little doubt that Mr. Smith would have earned distinction in any vocation equal to, and perhaps greater than, that which he achieved in the profession which his talents did so much to adorn, and which he left his debtor.

THE RIGHT HON. ALFRED HENRY THESIGER (Associate), third son of the first Lord Chelmsford, was born in 1838, and was educated at Eton and Oxford. He was called to the Bar in 1862, and became a Queen's Counsel in 1873, and in 1877, on the retirement of Sir Richard Amphlett, one of the Lord Justices of Appeal and a Privy Councillor. Whilst at the Bar, Mr. Thesiger was much engaged in cases which brought him into frequent association with Surveyors, whose general respect he earned by the kindliness and courtesy which distinguished him on all occasions. Mr. Thesiger joined the Institution in 1876, and remained an Associate up to the time of his death, which occurred very unexpectedly, after a short illness, on the 20th of October, 1880, in the 42nd year of his age.

LIST OF DONATIONS AND CONTRIBUTIONS TO JUNE 1st, 1881.

DONATIONS OF BOOKS, MAPS, &c.

Donors.	Title of Work.
Agricultural Gazette, Editor of the	"The Agricultural Gazette," 1880-81.
Architect, Editor of the .	"The Architect," 1880-81.
Bath and West of England Society	"Journal," 1880-81.
Black, C. A. H. . . .	Pamphlet on "The Employers' and Workmen's Act, 1875, and the Employers' Liability Act, 1880."
Builder, Editor of the . .	"The Builder," 1880-81.
Builder's Weekly Reporter, Editor of the . . .	"The Builder's Weekly Reporter," 1880-81.
Building News, Editor of the	"The Building News," 1880-81.
Chadwick, E. . . .	Pamphlets, entitled "Suggestions for the Competition in the Sanitation of the Dwellings of the Wage Classes," "Circulation or Stagnation," "The Jurisprudence of Local Administration," and "County Government in combination with Union Organisation, for the Improvement of Local Administration." By E. Chadwick.
Curtis, C. E. . . .	"Estates Management: a Practical Handbook for Landlords, Stewards, and Pupils."
Estate Exchange, Committee of the	Index to the "Estate Exchange Registers," 1880.
Estates Gazette, Editor of the	"The Estates Gazette," 1880-81.
Farmers' Club, The . .	"Journal," 1880-81.
Field, Editor of the . .	"The Field," 1880-81.
Fowler, W.	Ordnance Map of Kent.

Donors.	Title of Work.
Haywood, W.	"Report on the Works executed by the Hon. the Commissioners of Sewers of the City of London," 1880.
Horticulture, Journal of, Editor of the	"Journal of Horticulture," 1880-81.
Institution of Civil Engineers	"Minutes of Proceedings." Vols. LX., LXI., LXII., LXIII.
Institution of Civil Engineers of Ireland	"Transactions," Session 1880-81.
Institution of Mechanical Engineers	"Proceedings," 1880-81.
Land, The Editor of	"Land," 1881.
Land Agents' Record, Editor of the	"The Land Agents' Record," 1880-81.
Leaning, J.	"Quantity Surveying."
Liverpool Architectural Society	"Proceedings," 1880-81.
Lloyd, E.	"The Succession Laws of Christian Countries."
Lockwood & Co.	Tarbuck's "Handbook of House Property."
London and Middlesex Archæological Society	"Transactions," 1880-81.
Lucas, J.	Pamphlet on "London Water Supply."
Midland Institute of Mining, Civil, and Mechanical Engineers	"Transactions," 1880.
Mylne, R. W.	"The Builder's Price Book," 1776.
North of England Institute of Mining and Mechanical Engineers	"Transactions." Vol. XXIX., 1880-81.
Paul, E. J.	"Bigland's Gloucestershire," and "Fosbrooke's Gloucester."
Penfold, J. W.	"Antiquities of England and Wales." Vols. V., VI., VII., and VIII. In continuation of a previous Donation.
Quick, J.	Pamphlets on "The Water Supply of the Metropolis, and the Proposed Transfer of the London Water Companies to a Public Authority," and "Remarks on the Rating of Gas and Water Works." By J. Quick.

Donors.	Title of Work.
Raymond, J.	"The Architect's Legal Handbook," by J. Raymond and E. Jenkins.
Reid, P. S.	"The History of Fossil Fuel."
Royal Agricultural Society of England	"Journal." Vol. XVI., part 2.
Royal Institute of British Architects	"Proceedings," 1880-81.
Ryde, E.	"Metropolitan Rating." By E. and A. L. Ryde.
Sanitary Institute of Great Britain	"Transactions." Vols. I. and II.
Secretary of State for India	Account of the Operations of the Great Trigonometrical Survey of India. Vol. V.
Shone, J.	Paper on "Scientific and Sanitary *versus* Unscientific and Unsanitary Sewerage and Drainage."
Société des Géométres	"Journal," 1880-81.
Statistical Society	"Journal." Vol. XLIII., parts 2, 3, 4.
Venables, F.	"Modern London," 1805.
Vigers, M.	Barrett's "History of Bristol," 1879, and 6 of Kip's "Views"
Wallis, H. S.	Pamphlet on "Rain Collected from Roofs."
Williams, R. P.	Paper on "The Increase of Population in England and Wales," by R. P. Williams.

CONTRIBUTIONS IN MONEY TO LIBRARY FUND,

From June 1st, 1880, to June 1st, 1881.

	£	s.	d.
Balding, A.	2	2	0
Bedells, C. K.	2	2	0
Coverdale, F. J.	2	2	0
Fair, J. W.	2	2	0
Few, H. G.	2	2	0
Forshaw, E.	2	2	0
Mellersh, A. W.	2	2	0
Meysey-Thompson, A. C.	3	3	0
Morris, J. W.	5	5	0
Parker, The Hon. C. T.	2	2	0
Rees, W. A.	3	3	0
Robins, E.	3	3	0
Sexby, J. J.	2	2	0
Thurnall, J. E.	2	2	0
Thursfield, T. H.	3	3	0
Turner, W. W.	2	2	0

INSTITUTION OF SURVEYORS.

List of Members, June 1st, 1881, with Council for Session 1881-82.

Honorary Members.

Date of Election and of Transfer.		
1874, Apr. 13	BEDFORD, HIS GRACE THE DUKE OF	81 & 82, Eaton Square, S.W.
1880, May 10	BRAND, HENRY BOUVERIE WILLIAM, THE RIGHT HON.	Speaker's House, Palace of Westminster, S.W.
1878, Nov. 11	BUCAILLE, EUGÈNE	168, Boulevard de Strasbourg, Havre, France.
1875, Mar. 15	CAIRD, JAMES, C.B. . . .	Tithe and Inclosure Commission Office, St. James's Square, S.W.
1877, Jan. 15	CONSTABLE, JOHN, The Rev. . .	Marston Bigot, Frome, Somersetshire.
1880, Jan. 5	DERIVRY, MARIE AUGUSTE LOUIS	Noyon, Oise, France.
1880, Jan. 5	GILLET, GEORGES EDOUARD . .	Joinville, Haute-Marne, France.
1871, Jan. 30	GORE, CHARLES ALEXANDER, The HONORABLE	Office of Woods, &c., 1, Whitehall Place.
1871, Jan. 30	HOWARD, JAMES KENNETH, The HONORABLE	Office of Woods, &c., 1, Whitehall Place.
A. '69, Jul. 26 H.M.'71, Feb. 27	LEACH, GEORGE ARCHIBALD, LIEUT.-COLONEL . . .	Tithe and Inclosure Commission Office, St. James's Square, S.W.
1878, Nov. 11	LEFÈVRE, FRANÇOIS ETIENNE .	Sucy, Seine et Oise, France.
A. '68, Jun. 23 H.M.'77, May 14	LLOYD, JOHN HORATIO . . .	100, Lancaster Gate, W.
A. '72, Jan. 15 H.M.'72, Apr. 22	RIDLEY, GEORGE	2, Charles Street, Berkeley Square, W.

The names of those Members and Associates who have paid Life Composition Fees are distinguished thus *

Members.

Date of Election and of Transfer.		
1868, Jun. 15	ADAMS, CHARLES FREDERICK .	Barkway, Herts.
1881, Feb. 21	ADDIE, WILLIAM FORRESTER .	30, Winckley Square, Preston.
1872, Dec. 9	APPERLEY, WILLIAM HAVARD .	Hereford.
1869, May 8	ARDING, CHARLES BENNETT. .	22, Surrey Street, Strand, W.C.
1875, Nov. 8	AUSTIN, RUSSELL GARDINER .	The Wash, Hertford.

Date of Election and of Transfer.	MEMBERS.	
1877, Mar. 12	BALLS, JAMES MAYHEW	Castle Hedingham, Essex.
1881, Feb. 7	BANNISTER, THOMAS	Limehurst, Hayward's Heath, Sussex.
1868, Aug. 17	*BARRY, CHARLES	1, Westminster Chambers, Victoria Street, S
1868, Jun. 15	BEADEL, WILLIAM JAMES (*Vice-President*)	97, Gresham Street, E.C.
1868, Nov. 2	*BEAUMONT, GEORGE, JUN.	East Bridgford, near Nottingham.
1876, Apr. 24	BECKETT, WILLIAM	Oulton Park Farm, near Tarporley, Cheshire.
1879, Jan. 6	BEDELLS, CHARLES KING	6, John Street, Bedford Row, W.C.
1873, Dec. 8	BEESTON, FREDERICK	30, Lincoln's Inn Fields, W.C.
1875, Mar. 1	BENNETT, THOMAS OATLEY	Bruton, Somerset.
1873, Feb. 24	BEWICK, THOMAS JOHN	Haydon Bridge, Northumberland.
1869, Mar. 22	BIDWELL, CHARLES	Ely, Cambridgeshire.
1875, Apr. 12	BINGHAM, REUBEN	5, Bolton Street, Piccadilly, W.
1868, Oct. 26	BINNIE, THOMAS (*Member of Council*)	207, Hope Street, Glasgow.
1868, Aug. 10	BIRD, JAMES BINFIELD	West Cowes, Isle of Wight.
1870, Feb. 7	BLOUNT, WILLIAM	Orchehill House, Gerard's Cross, Bucks.
1874, Feb. 2	BOLAM, CHARLES GODFREY	38, Parliament Street, S.W.
1874, Feb. 2	BOLAM, HARRY GEORGE	Ingestre, Stafford.
1876, May 8	BOLAM, WILLIAM THOMAS	Cross House, Westgate Road, Newcastle-u Tyne.
1875, Dec. 13	*BOLDEN, JOHN LEONARD	Tehidy Office, Camborne, Cornwall.
1869, May 3	BOND, ERASMUS	22, Surrey Street, Strand, W.C.
1868, Jun. 15	BONNY, JAMES RIPPOTH	47, Old Broad Street, E.C.
1868, Jul. 13	BOWLER, WILLIAM ANTHONY	5, Museum Street, Ipswich.
1874, Dec. 7	BROOK, JAMES	28, John William Street; and Spring W New Mill, Huddersfield.
1874, Jan. 5	BROWN, DANIEL JOHNSON	61, Lincoln's Inn Fields, W.C.
1868, Jul. 13	BROWN, GEORGE	Roborough House, Barnstaple, Devonshire.
1871, Dec. 18	BROWN, JOHN	Rose Hill, Chesterfield.
1869, Feb. 22	BROWN, THOMAS FORSTER	Guildhall Chambers, Cardiff.
1869, Feb. 8	BROWN, WILLIAM	Tring, Herts.
1870, Dec. 12	BUCHAN, THOMAS	15, Barrack Street, Dundee.
1868, Jul. 13	BUCK, ALBERT	Worcester.
1871, Dec. 18	BUCKLAND, FRANK BOWRY	Windsor.
1868, Jun. 15	BUCKLAND, VIRGOE (*Member of Council*)	66, Cannon Street, E.C.
1868, Jul. 20	BURNELL, EDWARD HENRY	32, Bedford Row, W.C.
1875, Feb. 1	*BURROUGHES, THOMAS HENRY	16, Lower Berkeley Street, W.
A. '68, Aug. 10 M. '75, Mar. 15	BUTLER, ARTHUR	7, Staple Inn, W.C.
1874, Jan. 5	BUZZARD, ALFRED LINDSEY	22, Surrey Street, Strand, W.C.
A. '70, Feb. 7 M. '80, Nov. 22	CARRITT, ERNEST	4, Lime Street Square, Lime Street, E.C.
1876, Apr. 24	CASSELL, JAMES ROBERT	11, Billiter Square, E.C.
1874, Jan. 19	CASTLE, HENRY JAMES, SEN. (*Member of Council*)	5, Chancery Lane, W.C.

Date of Election and of Transfer.	MEMBERS.	
1873, Jan. 13	Castle, Robert	Merton Street, Oxford.
1872, Mar. 11	Castle, William Henry Baldwin	5, Chancery Lane, W.C.
1870, Dec. 12	Cates, Arthur	7, Whitehall Yard, S.W.
1875, Jan. 4	Cave, Henry H. . . .	The Manor House, Brigg, Lincolnshire.
1870, Jan. 10	Chancellor, Frederick . .	Chelmsford, Essex; and 8, Finsbury Circus, E.C.
1868, Jun. 15	Chapman, George	14, Cockspur Street, S.W.
1873, Jan. 27	Cheffins, Charles Richard .	23, Abingdon Street, S.W.
1868, Jul. 6	Chinnock, Frederick George	11, Waterloo Place, S.W.
1868, Jun. 15	Clarke, Thomas Chatfeild . (*Member of Council*)	63, Bishopsgate Street Within, E.C.
1868, Jun. 15	Clifton, Edward Norton . . (*Past-President*)	7, East India Avenue, E.C.
1868, Jun. 15	Clutton, Henry	9, Whitehall Place, S.W.
1868, Jun. 15	Clutton, John . . . . . (*Past-President*)	9, Whitehall Place, S.W.
A. '68, Jul. 13 / M. '75, May 10	Clutton, John Henry . . .	9, Whitehall Place, S.W.
A. '68, Jul. 6 / M. '74, Apr. 13	Clutton, Ralph	9, Whitehall Place, S.W.
A. '70, Jan. 10 / M. '75, Dec. 13	Clutton, Ralph William . .	Hartswood, Reigate, Surrey.
1868, Jul. 13	Clutton, Robert George . .	9, Whitehall Place, S.W.
1869, Jan. 11	Clutton, William James . .	The Mount, York.
1868, Jun. 15	Cobb, Robert Lake. . . .	Higham, Kent.
1868, Jul. 20	Collier, John	Salters' Hall, St. Swithin's Lane, E.C.
1868, Aug. 17	Collins, Henry Hyman . .	61, Old Broad Street, E.C.
1869, Apr. 5	Comely, John Gill	Winchester, Hants.
1876, Apr. 24	Coote, George	Smeetham Hall, Sudbury, Suffolk.
1872, Jan. 29	Couchman, Charles. . . .	6, Waterloo Street, Birmingham.
1880, Jan. 5	Coverdale, Frederick John .	Ingatestone Hall, Essex.
1878, Jan. 28	Cowgill, William	Bradford.
1869, Jan. 25	Crawter, John	Cheshunt, Herts.
1869, Jan. 25	Crickmay, George Rackstrow.	St. Thomas Street, Weymouth.
1874, May 11	Cronk, Edwyn Evans . . .	Sevenoaks, Kent.
1876, Jan. 10	Cross, John	77, King Street, Manchester.
1873, Apr. 21	Cross, William Stephens . .	53, Charing Cross, S.W.
1881, May 16	Crowther, Samuel	Bradford Estate Offices, Bolton.
A. '75, Mar. 1 / M. '80, Nov. 8	Cruse, Edmund	Warminster, Wiltshire.
1868, Jun. 15	Currey, Henry	37, Norfolk Street, W.C.
1880, Dec. 13	Curtis, Charles Edward . .	Deanyers, Alton, Hants.
1877, Apr. 16	Curtis, Robert Leabon . .	15 and 16, Blomfield Street, E.C.
1879, Apr. 28	Curtis, Samuel Perkins . .	15 and 16, Blomfield Street, E.C.
1878, Apr. 29	Darley, William	Eastfield, Askern, Doncaster.
1868, Jul. 13	David, Edward	Llandaff, Glamorganshire.
1873, Feb. 10	Davies, John Morgan . . .	Froodvale, Llandilo, Carmarthenshire.
1868, Jun. 15	Dent, John	34, Great James Street, W.C.

Date of Election and of Transfer.	MEMBERS.	
1868, Jun. 15	DENTON, JOHN BAILEY . . .	22, Whitehall Place, S.W.
A. 1869, Feb. 8 M. 1878, Feb. 25	DODGSON, WILFRED LONGLEY .	The Moor, Ludlow.
1878, Jan. 14	DOWNING, FREDERICK . . .	7A, Whitehall Yard, S.W.
1873, Feb. 10	DREW, HENRY	Exeter.
1872, Feb. 26	DREW, JOHN	9, Queen Street, Exeter; and Powderham Cas near Exeter.
A. 1876, Jan. 10 M. 1878, Feb. 25	DRIVER, CHARLES WILLIAM .	4, Whitehall, S.W.
1868, Jun. 15	DRIVER, ROBERT COLLIER . . (*Member of Council*)	4, Whitehall, S.W.
1880, Dec. 13	DRIVER, ROBERT MANNING . .	4, Whitehall, S.W.
1874, Jan. 5	DUNCH, CHARLES.	District Board Offices, White House, Commer Road, E.
1871, Jan. 30	DUNLOP, ALEXANDER MILNE .	3, Old Palace Yard, Westminster, S.W.
1868, Jun. 15	DYMOND, FRANCIS WILLIAMS .	Exeter.
1868, Aug. 3	EASTON, WILLIAM	6, Hammet Street, Taunton, Somersetshire.
1868, Aug. 3	EILOART, FERDINAND . . .	40, Chancery Lane, W.C.
1875, Feb. 1	ELLIS, JOHN WHITTAKER (Alderman)	5, Lancaster Place, W.C., and 18, Old Br Street, E.C.
1872, Feb. 26	EMMANUEL, BARROW	2, Finsbury Circus, E.C.
A. 1874, Feb. 16 M. 1876, Nov. 27	EVANS, WILLIAM ERNEST . .	52, Abbey Foregate, Shrewsbury.
1868, Aug. 3	EVE, WILLIAM	10, Union Court, Old Broad Street, E.C.
1873, May 5	EVES, GEORGE	Uxbridge, Middlesex.
1880, Jan. 5	FAIR, JACOB WILSON . . .	Lytham, Lancashire, and Haigh Hall, Wigan
1879, Mar. 31	FARRAR, JAMES	12, Market Street, Bury, Lancashire.
1873, Jan. 27	FIELD, FRANCIS HAYWARD . .	Merton Street, Oxford.
1880, Jan. 19	FLOCKTON, THOMAS JAMES . .	15, St. James' Row, Sheffield.
1879, Dec. 8	FORSHAW, EDWARD	Basford, Stoke-upon-Trent.
1872, Mar. 11	FOSTER, CHARLES ROLLS . .	54, Pall Mall, S.W.
1873, Dec. 8	FOWLER, WILLIAM . . . . (*Member of Council.*)	23, Waterloo Street, Birmingham.
1874, Jan. 5	FOX, FREDERICK FRANCIS . .	Melbourne, near Derby.
1875, Jan. 18	FRY, GEORGE FREDERICK . .	5, Tavistock Street, Covent Garden, W.C.
1868, Jun. 15	FULLER, FRANCIS.	12, Montague Villas, Richmond Hill, S.W.
1876, Jan. 10	GAIRDNER, EDWARD JAMES . .	42, University Street, W.C., and 9 and Craig's Court, Charing Cross, S.W.
1868, Jul. 6	GALSWORTHY, FREDERICK THOMAS	11, Waterloo Place, S.W.
1868, Sep. 28	GARDINER, WILLIAM JAMES . .	110, Great Russell Street, W.C.
1877, Feb. 12	GERMAN, WILLIAM	Measham, Atherstone, Derbyshire.
1875, Feb. 1	GILBERT, WILLIAM HENRY SAINSBURY	9, Old Jewry, E.C.
1880, Feb. 2	GILLART, RICHARD	Machynlleth, Montgomeryshire.
1869, Dec. 6	GIRDWOOD, JAMES	49, Pall Mall, S.W.

Date of Election and of Transfer.	MEMBERS.	
1876, Jan. 24	GLASIER, GEORGE HENRY BROUGHAM	41, Charing Cross, S.W.
A. 1873, May 19 M. 1878, Mar. 11	GORE, SPENCER W.	16, Whitehall Place, S.W.
1880, Apr. 12	GOULDING, WILLIAM PURDHAM.	41, Moorgate Street, E.C.
1873, Feb. 10	GOUTHWAITE, RICHARD . . .	Lumby, near South Milford, Yorkshire.
1875, Jan. 10	GRAHAM, WILLIAM	Victoria Chambers, Newport, Monmouthshire.
1875, Jan. 18	GREY, CHARLES GREY . . .	55, Parliament Street, Westminster, S.W.
1876, Mar. 28	GWYTHER, WILLIAM WARLOW .	43, Lincoln's Inn Fields, W.C.
1874, Mar. 16	HADDOCK, ROLAND	21, High Street, Croydon, Surrey.
1881, May 2	HALL, ERNEST	166, Queen Street, Portsea, Hants.
1878, Dec. 9	HALL, JOHN GEORGE . . .	8, Masbro' Road, West Kensington, W.
1875, Jan. 4	HARDING, JOSEPH	49, Lune Street, Preston.
1875, Dec. 17	HARDING, WILLIAM DANIEL . .	16, St. Paul's Churchyard, E.C.
1871, Feb. 23	HART, WILLIAM FREDERICK .	Lambeth Waterworks, Brixton Hill, S.W.
1868, Jul. 13	HARVEY, JOHN	6, Victoria Place, Haverfordwest, Pembrokeshire.
1868, Jul. 13	HARVEY, RICHARD HART . .	6, Victoria Place, Haverfordwest, Pembrokeshire.
1873, May 19	HASLAM, DRYLAND	17, Friar Street, Reading.
1868, Jul. 6	*HAYWOOD, WILLIAM	Guildhall, E.C.
1881, Apr. 4	*HEBBLETHWAITE, LOUIS . .	Conservancy Buildings, Hull.
1871, Jan. 16	HEDLEY, THOMAS FENWICK . .	Sunderland.
1881, May 2	HEDLEY, THOMAS FENWICK, JUN.	Sunderland.
1870, Jan. 10	HILLIARD, GEORGE BRIDGE .	Chelmsford, Essex.
1868, Jul. 13	HIPPISLEY, EDWIN	Chamberlain Street, Wells, Somersetshire.
1878, Dec. 9	HOBGEN, FRANCIS NEALE . .	East Street, Chichester.
1878, Dec. 9	HODSON, GEORGE	Town Hall, Loughborough.
1874, Nov. 16	HOLDEN, ISAAC	64, Cross Street, Manchester.
1874, Nov. 16	HOLDEN, JOHN	64, Cross Street, Manchester.
1868, Jun. 15	HORSEY, THOMAS	11, Billiter Square, E.C.
1869, Feb. 22	HORSFALL, RICHARD	Halifax, Yorkshire.
1869, Apr. 5	HORWOOD, JAMES.	10, Paternoster Row, E.C.
1868, Sep. 28	HUDSON, WILLIAM . . .	19, Bennet's Hill, E.C., and Hope Lodge, 181, Grove Lane, Camberwell.
1868, Nov. 2	HUMBERT, CHARLES F. . . .	Watford, Herts.
1869, Feb. 22	HUMPHREYS, CHARLES . . .	6, Crosby Square, Bishopsgate Street Within, E.C.
1868, Jun. 15	HUNT, SIR HENRY ARTHUR, C.B.	45, Parliament Street, Westminster, S.W.
1874, May 11	HUNT, HENRY ARTHUR, JUN. .	3, Victoria Street, Westminster, S.W.
1869, Mar. 8	HUNT, JOSIAH	6, Queen Anne's Gate, Westminster, S.W.
1868, Jun. 15	HUSKINSON, THOMAS . . . (*Past-President*)	Epperstone, Nottingham.
1874, Jan. 19	HUSKINSON, WILLIAM LAMBE .	The Manor House, Epperstone, Nottingham.
1869, Feb. 22	HUSSEY, GEORGE HENRY . .	The Green, High Wycombe, Bucks.
1868, Jun. 15	I'ANSON, EDWARD . . . . (*Vice-President*)	7A, Laurence Pountney Hill, E.C.
1880, Jan. 19	I'ANSON, EDWARD BLAKEWAY .	7A, Laurence Pountney Hill, E.C.
1880, Feb. 16	JACKSON, CHARLES	25, Brazennose Street, Manchester.

Date of Election and of Transfer.	MEMBERS.	
1869, Jul. 26	JACKSON, FREDERICK. . . .	Nottingham.
1876, Apr. 3	JEMMETT, ALEXANDER . .	Nympsfield, Stonehouse, Stroud, Gloucestersh
A. '69, Apr. 5 / M. '78, Feb. 25	JONAS, HENRY	4, Whitehall, S.W.
1868, Jul. 27	JONAS, JOHN CARTER . . .	27, Market Hill, Cambridge.
1873, Apr. 21	JONES, HENRY PARR . . .	Portway House, Warminster.
1880, Nov. 8	KEIRLE, ROBERT	111, Victoria Street, S.W.
1869, Mar. 22	KING, WILLIAM DAVID . . .	Farlington Farm, Havant, Hants.
1868, Sep. 28	KNOLLYS, JAMES EDWARD . .	Fitzhead Court, Taunton, Somerset.
1871, Feb. 27	KNOWLES, WILLIAM	Albion Chambers, King Street, Gloucester.
1868, Aug. 3	LAMBERT, WILLIAM	1, New Broad Street, E.C.
1876, Apr. 24	LANE, CECIL NEWTON . . .	Whiston Hall, Shifnal, Salop.
1881, Jan. 24	LANSDOWN, GEORGE	2 & 3, Warwick Street, Charing Cross, S.W.
1868, Nov. 9	LAURANCE, JOHN, JUN. . . .	Warmington, near Oundle, Northamptonshire
1868, Jul. 20	LAVENDER, JOSEPH	26, Bedford Row, W.C.
1878, Nov. 11	*LEANE, GEORGE HENRY . .	23, Queen Anne's Gate, S.W.
1874, Feb. 2	LEE, FREDERICK.	6, Great College Street, Westminster, S.W.
1878, Mar. 25	LEE, WILLIAM WARD . . .	33, Finsbury Circus, E.C.
1870, Feb. 7	LEES, JOHN	Reigate, Surrey.
1875, Mar. 15	LOFTS, HENRY	99, Mount Street, Grosvenor Square, W.
1876, Feb. 7	LOVEJOY, ALFRED	7, Poultry, E.C.
1869, Jul. 12	LYE, JOHN GAUNT	8, Lancaster Place, W.C.
1868, Nov. 2	MACAULAY, COLIN ALEXANDER .	Leicester.
1869, Jan. 25	MANN, CHARLES JOHN . . .	29, Great George Street, S.W.
1875, Jan. 18	MANN, ROBERT WILKS . . .	7, Hobart Place, S.W.
1869, Mar. 29	MARR, JAMES	8, Adam Street, Adelphi, W.C.
1876, Mar. 20	*MARTIN, GILSON . . .	Chatsworth, Chesterfield.
1875, Jan. 4	MARTIN, HOWARD	145, High St., Croydon; & The Ferns, E. Croyd
1870, Feb. 7	*MARTIN, JAMES . . . . . *(Member of Council)*	Wainfleet, Boston, Lincolnshire.
1876, May 8	MARTIN, JOHN MAY	Lower Musgrave House, Exeter.
1875, May 10	MASON, WILLIAM LUDLAM . .	The High Holme, Louth, Lincolnshire.
1868, Jun. 15	MATHEWS, JEREMIAH . . .	15, Waterloo Street, Birmingham.
1868, Jun. 15	*MATHEWS, WILLIAM	15, Waterloo Street, Birmingham.
1879, Dec. 8	MELLERSH, ALFRED WILLIAM .	Godalming, Surrey.
1876, Feb. 7	MCCALL, GEORGE	33, Victoria Chambers, Market Place, Blackburn
1877, Feb. 12	MINTER, WILLIAM	81, Bondgate, Darlington.
1874, Dec. 7	MOORE, EDWARD WELLS . .	Middle Claydon, Winslow, Bucks.
1876, Nov. 13	MORRIS, JOHN WARRINGTON .	Gracechurch Buildings, Gracechurch Street, E
1881, Feb. 7	MORTIMER, JOHN CAMDEN . .	5, Great Queen Street, S.W.
1878, Dec. 9	MURPHY, EDMUND	Dunfanaghy, Letterkenny, Ireland.
1874, Apr. 13	NAYLOR, ARTHUR MILLINGTON .	3, Old Palace Yard, Westminster, S.W.
1868, Nov. 2	NEALE, CHARLES JAMES . .	High Oakham, Mansfield, Notts.

Date of Election and of Transfer.	MEMBERS.	
1879, Feb. 3	*Neame, Frederick, Jun. . .	Macknade, Faversham, Kent.
1872, Dec. 9	Newman, Francis	Ryde, Isle of Wight.
1875, Jan. 18	Nichols, Daniel Cubitt . .	7, Howard Street, Strand, W.C.
1872, Jan. 29	Nisbet, Ralph P.	Chester Hill House, Belford, Northumberland.
1875, Apr. 26	Nockolds, Martin	Saffron Walden, Essex.
1876, Mar. 20	Norman, James Maurice . .	Uxbridge, Middlesex.
1869, Mar. 8	Norman, William	8, Spring Gardens, S.W.
1868, Jul. 20	North, George	22, Whitehall Place, S.W.
1871, Feb. 13	Notley, Richard Albert . .	80, Cornhill, E.C.
1868, Jul. 6	*Oakley, Christopher . . .	10, Waterloo Place, S.W.
1877, Apr. 30	Oakley, William	29, Charles Street, St. James's Square, S.W.
1869, Mar. 8	Owen, Thomas Rule . . .	High Street, Haverfordwest, Pembrokeshire.
A. '75, Nov. 8 M. '81, April 4	Pain, Coard Squarey . . .	4, Cook Street, Liverpool.
1872, Dec. 9	Parsons, Henry.	Haslebury Plucknett, Crewkerne, Somerset.
1875, Nov. 8	Paterson, Robert	10, Hanover Street, Edinburgh.
1881, Jan. 24	Pattison, Jacob Luard . . .	3, Grosvenor Place, S.W.
1881, Jan. 10	Paul, Edward Theodorus . .	13, Dickenson Street, Manchester.
1870, Dec. 12	Paxton, Jonas	Bicester, Oxfordshire.
1880, Dec. 13	*Payne, Alexander	4, Storey's Gate, S.W.
1868, Jun. 15	Penfold, John Wornham . . *(Honorary Secretary)*	29, Great George Street, Westminster, S.W.
1876, May 8	Peppercorn, John Hutchinson	Eaton Socon, Bedfordshire.
1876, Feb. 21	Phillips, Frederick Hamilton	Oakleigh House, Neath, Glamorganshire.
1880, Jan. 5	Potts, Joseph, Jun. . . .	North Cliff, Roker, Sunderland.
1870, Jan. 24	Poundley, John Edward . .	Black Hall, Kerry, Montgomeryshire.
1877, May 14	Powell, Evan	Broomcliffe, Llanidloes, Montgomeryshire.
A. '74, Feb. 16 M. '80, Nov. 22	Powell, Reginald Henry . .	St. Swithin's Lane, High Street, Lewes, Sussex.
1877, Dec. 10	Pownall, George Harry . .	29, Parliament Street, S.W.
1872, Nov. 25	Prickett, Walter Bellson .	62, Chancery Lane, W.C.
1877, May 14	Prior, Richard James . . .	Canterbury, and 61, Lincoln's Inn Fields, W.C.
1870, Jan. 24	Rawlence, George	Salisbury, Wilts.
1870, Feb. 7	Rawlence, James	Salisbury, Wilts.
1868, Oct. 26	Raynbird, Hugh Edward . .	Basingstoke, Hants.
1880, Dec. 13	Rees, William Andrew . .	7, Cornhill, E.C.
1879, Apr. 28	Rees, William George . .	Holly House, Newport, Monmouthshire.
1878, Nov. 11	Reid, Patrick Sandeman . .	Local Board, Hendon.
1876, Dec. 18	Richardson, John	Methley Park, Leeds.
1873, Feb. 10	Rickman, Thomas Miller . .	8, Montague Street, Russell Square, W.C.
1868, Jun. 15	Rigden, Richard Henry . .	The Close, Salisbury, Wilts.
1868, Aug. 17	Roberts, Richard	42, New Broad Street, E.C.
1879, Mar. 31	Robins, Edmund.	5, Waterloo Place, S.W.
1868, Jul. 13	Robins, Edward Cookworthy .	14, John Street, Adelphi, W.C.
1881, Jan. 24	Robins, William Henry . .	82A, New Street, Birmingham.

Date of Election and of Transfer.	MEMBERS.	
1881, Apr. 4	Robinson, Henry	7, Westminster Chambers, S.W.
1872, Dec. 9	*Robson, Edward Robert . .	41, Parliament Street, Westminster; and 6, St. Germain's Place, Blackheath, S.E.
1879, Mar. 17	Robson, Henry	Old Elvet, Durham.
1881, Jan. 24	Rogers, Edward Phippard George	16, Borough, London Bridge, S.E.
A. '74, Mar. 2 M. '79, Feb. 17	Rogers, Sydney James . .	5, Westminster Chambers, S.W.
A. '74, Dec. 7 M. '76, Jan. 24	Rolleston, John Fowke Lancelot	Grey Friars, Leicester.
1868, Aug. 31	Rosser, William	Llanelly, Carmarthen.
1878, Apr. 8	*Rowe, Richard Reynolds . .	10, Emmanuel Street, Cambridge.
A. '73, Dec. 8 M. '75, Nov. 8	Rushworth, Edmund Walter	22, Savile Row, W.
A. '76, Dec. 18 M. '80, Nov. 8	Ryde, Arthur Lyon . . .	29, Great George Street, S.W.
1868, Jun. 15	Ryde, Edward . . . . (*President*)	29, Great George Street, S.W.
1876, Jan. 24	Sadler, George William . .	467, High Street, Cheltenham.
1875, Apr. 26	Sanday, George Henry . .	Wensley House, Bedale, Yorkshire.
1876, Nov. 27	Sandy, Henry	Newport Road, Stafford.
1869, Feb. 8	Saunders, Cecil George . .	29, Great George Street, S.W.
1869, Feb. 22	Saunders, Edward	6, Bishopsgate Street Without, E.C.
1868, Aug. 17	Savill, Alfred	3, St. Helen's Place, E.C.; and Chigwell, Essex
1879, Jan. 6	Scargill, Alfred	11, East Parade, Sheffield.
1874, Feb. 2	Scarth, William T. . . . (*Member of Council*)	Raby Castle, Darlington.
1875, Mar. 1	Searle, Francis William . .	Marsh House, Tottenham, Middlesex.
1879, Mar. 3	Selby, Charles Frederic . .	5, Westminster Chambers, S.W.
1875, Mar. 1	Shackel, George	12, The Forbury, Reading, Berks.
1876, Mar. 6	Shaw, John	College Place, Derby.
A. '77, Jan. 29 M. '80, Nov. 8	Shoppee, Charles Herbert .	61, Doughty Street, W.C.
1868, Jul. 13	Shoppee, Charles John . . (*Member of Council*)	61, Doughty Street, W.C.
1872, Apr. 22	Slater, George.	Canterbury.
1868, Oct. 26	Smellie, Thomas Davies . .	209, St. Vincent Street, Glasgow.
1868, Aug. 17	Smith, Charles Bovill . .	Wickham, Hants.
1868, Jul. 13	Smith, Charles John . . .	94, Cheyne Walk, Chelsea, S.W.
A. '70, Mar. 21 M. '78, Mar. 11	Smith, Charles John . . .	16, Whitehall Place, S.W.
A. '75, Apr. 26 M. '81, Jan. 24	Smith, Henry Herbert . .	6, Whitehall, S.W.
1868, Aug. 10	Snooke, William	6, Duke Street, London Bridge, S.E.
1868, Nov. 9	Southwell, Charles Josiah .	9, Whitehall Place, S.W.
1868, Jul. 27	Spackman, Henry	6, Terrace Walks, Bath.
1868, Jun. 15	Squarey, Elias Pitts . . . (*Vice-President*)	22, Great George Street, S.W.; and The Mo Downton, Salisbury.
1871, Feb. 13	St. Quintin, Perry. . . .	37, Threadneedle Street, E.C.
1868, Aug. 17	Stanley, Henry	Bury St. Edmunds, Suffolk.
1868, Jun. 15	Statter, Thomas	Standhall, Whitefield, Manchester.

Date of Election and of Transfer.	MEMBERS.	
1877, Jan. 15	STENNING, ALEXANDER ROSE	27, Fenchurch Street, E.C.
1868, Jun. 15	STEPHENSON, CHARLES (*Member of Council*)	45, Parliament Street, Westminster, S.W.
1876, Jan. 24	STEPHENSON, CHRISTOPHER	Naworth Estate Office, Brampton, Cumberland.
1868, Jul. 27	STEWARD, HERBERT THOMAS	3, Victoria Street, S.W.
1868, Jul. 20	STURGE, ROBERT FOWLER	34, Corn Street, Bristol.
1868, Jun. 15	STURGE, WILLIAM (*Past-President*)	34, Corn Street, Bristol.
1874, Feb. 16	SWORDER, GEORGE EDWARD	Bishop's Stortford, Herts.
1875, Feb. 15	SWORDER, WILLIAM	Stapleford Tawney Hall, near Romford, Essex.
A. '70, Feb. 7 / M. '78, Jan. 28	TATHAM, GEORGE HENRY	34, Essex Street, Strand, W.C.
1874, Jan. 19	THOMAS, JOSIAH	Athenæum Chambers, Nicholas Street, Bristol.
1878, Jan. 14	*THURSFIELD, THOMAS HOWELLS	Barrow, Brosely, Shropshire.
1868, Jun. 15	THYNNE, EDWARD LEWIS	11, Great George Street, S.W.
1869, Jan. 11	THYNNE, FREDERICK GEORGE	11, Great George Street, S.W.
1875, Jan. 18	TOLLEY, JAMES	66, Cannon Street, E.C.
1877, Jan. 29	TOOTELL, JOSEPH	Maidstone, Kent.
1877, Jan. 29	TOOTELL, RICHARD WILLIAM	11, Queen Victoria Street, E.C.
1876, Apr. 24	TOWER, BROWNLOW RICHARD CHRISTOPHER	Market Harborough, Leicestershire.
1868, Jun. 15	TRIST, GEORGE	62, Old Broad Street, E.C.
1874, May 11	TROLLOPE, CHARLES BROWN	13, Parliament Street, Westminster, S.W.
1868, Jun. 15	TRUMPER, RICHARD	23, Lincoln's Inn Fields, W.C.
1868, Aug. 8	TUCKETT, PHILIP DEBELL	10A, Old Broad Street, E.C.
1873, Dec. 9	TUNLEY, GEORGE	14, Clement's Lane, E.C.
1869, Feb. 8	TURNER, WILLIAM	1, Butter Market, Ipswich, Suffolk.
1879, May 12	TURNER, WILLIAM WEBB	9, Clinton Place, Seaford, Sussex.
1880, Feb. 16	VAUGHAN, EVAN	6, Moorgate Street, E.C.
A. 1873, Dec. 8 / M. 1878, Nov. 11	VENABLES, FREDERICK	62, Chancery Lane, W.C.
1876, Feb. 21	VERNON, ARTHUR	Borshams, High Wycombe, Bucks; and 26, Great George Street, Westminster, S.W.
1880, Mar. 1	VERNON, WALTER LIBERTY	4, Trinity Street, Hastings; and 26, Great George Street, Westminster, S.W.
1876, Jan. 20	VIGERS, ASTLEY	4, Frederick's Place, E.C.
1871, Dec. 4	VIGERS, EDWARD, JUN.	38, Parliament Street, Westminster, S.W.
1868, Jun. 15	VIGERS, FRANCIS (*Member of Council*)	4, Frederick's Place, E.C.
1868, Jun. 15	VIGERS, ROBERT	4, Frederick's Place, E.C.
1872, Dec. 9	VULLIAMY, GEORGE	Metropolitan Board of Works, Spring Gardens, S.W.
1869, Jan. 25	WARING, THOMAS	St. John's Square, Cardiff.
A. '69, Mar. 8 / M. '75, Apr. 12	WARNER, WILLIAM HENRY	99, Mount Street, Grosvenor Square, W.
1868, Jun. 15	WATNEY, DANIEL (*Member of Council*)	62, Old Broad Street, E.C.

Date of Election and of Transfer.	MEMBERS.	
1880, Mar. 1	WATSON, HERBERT EDWARD .	Thorney, near Peterborough.
A. 1876, Dec. 18 M. 1879, Nov. 10	WATTS, CHARLES	37, Great George Street, Westminster, S.W.
1872, May 6	WEALL, JOHN	38, High Street, Watford.
1869, Dec. 6	WEBB, GEORGE	Tunstall, Sittingbourne, Kent.
1868, Jul. 20	WESTBURY, GILES	Andover, Hants.
1868, Nov. 9	WHICHCORD, JOHN	Palace Chambers, 9, Bridge Street, Westminst
1874, Apr. 27	WIDNELL, FREDERICK GRAINGER	13, Parliament Street, Westminster, S.W.
A. 1870, Feb. 7 M. 1876, Nov. 13	*WIGRAM, JOHN	South Collingham, Newark, Notts.
1868, Jul. 20	WILLIAMS, GEORGE BARNES .	Frederick's Place, E.C.
1870, May 9	WILLIAMS, STEPHEN WILLIAM .	Rhayader, Radnorshire.
1880, Mar. 1	WILLIAMS, WILLIAM	Salop Road, Oswestry.
1876, Mar. 6	WILLIAMSON, FRANCIS . . .	31, Castle Gate, Nottingham.
1868, Aug. 10	WILLMOT, FRANCIS	6, Waterloo Street, Birmingham.
1868, Jun. 15	WITHALL, RICHARD AUGUSTUS .	29, Great George Street, Westminster, S.W.
1868, Jun. 15	WOOD, FREDERICK	34, Regency Square, Brighton.
1868, Jul. 13	WOOD, WILLIAM BRYAN . . .	Chippenham, Wilts.
1873, Feb. 10	WOODCOCK, RICHARD . . .	20, Darlington Street, Wolverhampton.
1875, Mar. 1	WOODTHORPE, EDMUND. . .	2, Coleman Street Buildings, Moorgate St., E.C.
1881, Feb. 21	WOOLLEY, REGINALD. . . .	South Collingham, Newark, Notts.
A. '76, Feb. 7 M. '80, Nov. 8	WOOLLEY, THOMAS CECIL SMITH	South Collingham, Newark, Notts.
1868, Jun. 15	WOOLLEY, THOMAS SMITH . . (*Vice-President*)	South Collingham, Newark, Notts.
A. 1871, Nov. 13 M. 1877, Jan. 29	WOOLLEY, WILLIAM EDWARD .	Loughborough, Leicestershire.
1872, Dec. 9	WRIGHT, WILLIAM EDWARD .	King's Lynn, Norfolk.
1872, Apr. 22	*WRIGHT, WILLIAM	Wollaton, Nottinghamshire.
1876, Feb. 21	YEOMAN, GEORGE DUNDAS . .	Priory Lodge, Bedford.

Associates.

Date of Election.		
1876, Mar. 20	ACLAND, SIR THOMAS DYKE, BART., M.P.	Killerton, Exeter.
1881, Jan. 10	ANDERSON, ROBERT	37, Great George Street, S.W.
1868, Nov. 2	BADCOCK, PHILIP	9, Whitehall Place, S.W.
1879, Dec. 8	BALDING, ALBERT	Barkway, Herts.
1880, Dec. 13	BANKES, JOHN ELDON . . .	2, Pump Court, Temple, E.C.
1868, Jul. 27	BARRY, JOHN WOLFE . . .	23, Delahay Street, Westminster, S.W.
1875, Dec. 13	BATTEN, JOHN WINTERBOTHAM	3, Harcourt Buildings, Temple, E.C.
1876, Dec. 18	BAZALGETTE, CHARLES NORMAN	1, Essex Court, Temple, E.C.
1881, May 16	BEADEL, HENRY GRANT . . .	97, Gresham Street, E.C.
1879, Feb. 3	BEALE, JAMES SAMUEL . . .	28, Great George Street, S.W.
1868, Nov. 9	BEAUCHAMP, CHARLES DAVIE .	9, Whitehall Place, S.W.
1880, Jan. 19	BECK, T. COKER	Sherborne St. John, Basingstoke, Hants.
1878, Feb. 11	BEVAN, WALTER	Melton Hill, Townsville, Queensland.
1869, Feb. 22	*BIDDER, GEORGE PARKER, Q.C.	3, Paper Buildings, Temple, E.C.

Date of Election.	ASSOCIATES.	
1875, Feb. 1	Bidwell, Shelford . . .	9, Whitehall Place, S.W.
1875, Feb. 1	Birch, Robert William Peregrine	5, Westminster Chambers, S.W.
1875, Feb. 1	Blakeway, John	5, Bloomsbury Square, W.C.
1878, May 13	Blosse, Edward F. Lynch .	2, Cathedral Road, Cardiff.
1879, Mar. 31	Boodle, Francis Edward . .	4, Whitehall, S.W.
1868, Jun. 23	Bramwell, Frederick Joseph	37, Great George Street, Westminster, S.W.
1870, Dec. 12	Cardall, Frederic William .	9, Whitehall Place, S.W.
1869, Jul. 26	Carlisle, William Thomas .	8, New Square, Lincoln's Inn, W.C.
1879, Jan. 6	Casserley, Samuel William .	7, Crown Office Row, Temple, E.C.
1871, Feb. 13	Castle, Edward James . . .	8, King's Bench Walk, Temple, E.C.
1870, May 9	Catling, Robert Charles . .	Needham Hall, Elm, Cambridgeshire.
1879, May 12	Chapman, James Charles . .	58, Lincoln's Inn Fields, W.C.
1876, Nov. 13	Clarke, Daniel	Easton Street, High Wycombe, Bucks.
1880, Dec. 13	Clark, Harding Thomas . .	67, Fellows Road, South Hampstead, N.W.
1876, Feb. 7	Clayden, Walter	6, Moorgate Street, E.C.
1881, May 16	Connelly, John Joseph . .	60, Queen Victoria Street, E.C.
1874, Jan. 5	Cooke, William George . .	3, Vine Terrace, York Road, S.E.
1881, Jan. 10	Courthope, Alexander . .	Bignor Park, Pulborough, Sussex.
1870, Jan. 10	Crawley, William Jeeves . .	10, Waterloo Place, Pall Mall.
1881, Mar. 21	Cresswell, John Theodore Ross	Spring Grove, Isleworth.
1881, Feb. 7	Crofts, Ewan Neville . . .	30, Lincoln's Inn Fields, W.C.
1879, Mar. 17	Cudlipp, William	62, Old Broad Street, E.C.
1875, Feb. 15	Dale, John	16, Whitehall Place, S.W.
1875, Apr. 26	Dashwood, Frederick Loftus	Kirtlington, Oxford.
1877, Dec. 10	Davis, James	32, Strand, W.C.
1869, Jan. 25	Dowden, Henry Joseph . .	4, Whitehall. S.W.
1869, Jun. 28	Easton, Edward	9, Delahay Street, S.W.
1877, Apr. 16	Edwards, John Frederick James	Orleton, Tenbury, Worcestershire.
1879, Jan. 20	Eiloart, Frederick Edward .	40, Chancery Lane, W.C.
1880, Mar. 15	Ellis, Ernest Harold . .	132, High Street, Guildford.
1869, Feb. 8	Fawcett, James Pogue. . .	5, Lancaster Place, W.C.
1880, Jan. 19	Fenning, Herbert Samuel .	Park Farm Office, Woburn, Bedfordshire.
1881, Feb. 7	*Few, Harry Garrard . . .	5, Lancaster Place, W.C.
1869, Feb. 22	Fowler, John	2, Queen Square Place, S.W.
1878, Feb. 11	Freeman, George Mallows .	11, King's Bench Walk, Temple. E.C.
1878, Mar. 11	Freshfield, Edwin . . .	5, Bank Buildings, E.C.
1876, Mar. 20	*Freshfield, William Dawes .	5, Bank Buildings, E.C.
1877, Mar. 12	Fulton, Hamilton	7, Vigo Street, Regent Street, W.
1868, Jul. 27	Garrard, Arthur	17, Finsbury Square, E.C.
1876, Dec. 18	Gedge, Sydney	1, Old Palace Yard, S.W.

Date of Election.	ASSOCIATES.	
1879, Apr. 28	GEPP, CHARLES BRAMSTON OSBORNE	Chelmsford, Essex.
1872, Apr. 8	GEPP, THOMAS MORGAN	Chelmsford, Essex.
1878, Dec. 9	GIBSON, WALTER MATTHEW	Privy Purse Office, Buckingham Palace, S.W.
1874, Feb. 16	GOLDNEY, GABRIEL PRIOR	3, Essex Court, Temple, E.C.
1877, Feb. 12	GOTTO, FREDERICK EDWARD	New Barnes Road, Ely, Cambridgeshire.
1869, Jan. 11	GRANTHAM, RICHARD BOXALL (*Associate of Council*)	22, Whitehall Place, S.W.
1874, Jan. 5	GRANTHAM, RICHARD FUGE	22, Whitehall Place, S.W.
1881, Mar. 21	GRANTHAM, WILLIAM, Q.C., M.P.	3, Paper Buildings, Temple, E.C.
1880, Dec. 13	GULLY, WILLIAM COURT, Q.C.	Farrar's Buildings, Temple, E.C.
1877, Mar. 26	HARDING, EDWARD ERNEST	16, St. Paul's Churchyard, E.C.
1877, Mar. 26	HARDING, WILLIAM DANIEL, JUN.	16, St. Paul's Churchyard, E.C.
1881, Feb. 21	HARPER, EDGAR JOSIAH	191, Burdett Road, E.
1878, Jan. 28	HARRINGTON, GEORGE FREDERICK	16, Abchurch Lane, E.C.
1876, Dec. 18	HARRISON, WILLIAM GEORGE, Q.C.	11, King's Bench Walk, Temple, E.C.
1878, Dec. 9	HARVEY, JOHN JAMES SAYER	Tunstall, Sittingbourne.
1880, Dec. 13	HEDGER, ARTHUR CONSTANTINE	80, Cheapside, E.C.
1875, Dec. 13	HIGGIN, WILLIAM HOUSMAN, Q.C.	4, St. James' Square, Manchester.
1875, Jan. 4	HILL, ALEXANDER STAVELEY, Q.C., M.P., &c., &c.	3, Garden Court, Temple; and Oxley Mano Stafford.
1870, May 23	HOLLWAY, JOHN GEORGE	Lamb Building, Temple, E.C.
1868, Jul. 20	HORSLEY, RICHARD	11, Bull-and-Mouth Street, E.C.
1869, Feb. 8	HUBBERSTY, HENRY ALFRED	Buxton, Derbyshire.
1881, Feb. 7	INGLEBY, HERBERT	Valentines, Ilford, Essex.
1873, Feb. 10	INGRAM, WALTER FEILDE	89, Chancery Lane, W.C.; and Firle, Lewes.
1880, Dec. 13	JAMES, SIR HENRY, Q.C., M.P.	1, New Court, Temple, E.C.
1879, Dec. 8	JANSON, FREDERICK HALSEY	41, Finsbury Circus, E.C.
1879, Nov. 24	JESSETT, CHARLES	62, Old Broad Street, E.C.
1870, Jan. 24	JOHNSTON, ANDREW	97, Gresham Street, E.C.
1875, Dec. 13	KAYE, JOHN EDWARD	8, John Street, Adelphi, W.C.
1881, May 16	KETTLE, FREDERICK CHARLES	10, Waterloo Place, S.W.
1873, Apr. 21	*KING, WILLIAM	Gas Office, Duke Street, Liverpool.
1874, Feb. 2	LEDGARD, FREDERICK THOMAS DURELL	1, Temple Gardens, Temple, E.C.
1868, Jul. 6	LEE, CHARLES WILLIAMS	8, Adelphi Terrace, W.C.
1876, Apr. 3	LEE, GEORGE CANSFIELD	North Eastern Railway, York.
1873, Jan. 27	LERMIT, ALFRED WILLIAM	32, Bedford Row, W.C.
1874, Feb. 16	LITTLER, RALPH DANIEL MAKINSON, Q.C.	1, Plowden Buildings, Temple, E.C.
1879, Dec. 8	LLOYD, EYRE	6, Pump Court, Temple, E.C.
1869, Mar. 4	LOTT, JOSEPH	19, Great George Street, S.W.
1877, May 18	LUCAS, JOSEPH	Tooting Graveney, S.W.

Date of Election.	ASSOCIATES.	
1876, Jan. 15	MARRIOTT, GEORGE WHARTON .	Ingestre, Stafford.
1874, Feb. 16	MARRIOTT, WILLIAM THACKERAY, Q.C., M.P.	6, Crown Office Row, Temple, E.C.
1873, Nov. 13	MARTIN, CHARLES WILLIAM .	Quorn Place, Loughborough, Leicestershire.
1878, May 13	MAUGHAN, JOSEPH HENRY . .	9, New Street, Great Grimsby.
1878, Jan. 28	MESTON, JOSEPH FYFE . . .	20, Spring Gardens, S.W.
1879, Jan. 6	MEYSEY-THOMPSON, ALBERT CHILDERS	4, Paper Buildings, Temple, E.C.
1875, Jan. 4	MICHAEL, WILLIAM HENRY, Q.C.	38, Parliament Street, S.W.
1881, Feb. 7	MOSLEY, TONMAN	Bangors, Iver, Uxbridge.
1869, Jan. 25	NASH, ALFRED JAMES . . .	Farnham, Surrey.
1875, Dec. 13	NEVILE, HENRY WILLIAM . .	Broughton Estate Office, 8, John Dalton Street, Manchester.
1875, Feb. 1	NEWMAN, GEORGE GUNNELL .	75, Cornhill, E.C.
1880, Jan. 19	NEWMARCH, HENRY CHARLES .	10, Lincoln's Inn Fields, W.C.
1874, Feb. 2	NIXON, SAMUEL	29, Great George Street, S.W.
1878, Feb. 11	NORRIS, WALTER HENRY . .	Alban Villa, Watford, Herts.
1880, Jan. 19	PARKER, CECIL THOMAS, THE HON.	Evershot, Dorsetshire.
1876, Apr. 24	PARKER, FREDERICK SEARLE .	17, Bedford Row, W.C.
1875, May 10	PAYNE, WILLIAM PERCY . .	Midland Railway Station, Derby; and 136, Mansfield Road, Nottingham.
1872, Nov. 11	PAYNE, WILLIAM SETH ROBERT	141, Fenchurch Street, E.C.
1869, Dec. 6	PETRE, HENRY WILLIAM, THE HON.	Springfield, Chelmsford, Essex.
1869, Feb. 22	PHILBRICK, FREDK. ADOLPHUS, Q.C.	Lamb Building, Temple, E.C.
1875, Jan. 4	PLEDGER, JOSEPH AUGUSTUS .	Boreham Lodge, Chelmsford.
1869, Apr. 5	PRICE-WILLIAMS, RICHARD . .	38, Parliament Street, S.W.
1871, Feb. 27	QUICK, JOSEPH, JUN.	29, Great George Street, S.W.; and Sumner Street, Southwark, S.E.
1868, Nov. 9	REES, JOHN CHARLES . . .	13, Great George Street, S.W.
1869, Feb. 8	REX, WILLIAM	311, Kentish Town Road, N.W.
1876, May 8	RICH, ROBERT	Sarsden Estate Office, near Chipping Norton, Oxfordshire.
1876, Jan. 24	ROBERTS, CHARLES	3, Upper Montague Street, Russell Square, W.C.
1875, Nov. 8	RYDE, EDWARD HARROW . .	Cranley House, Fontenoy Road, Balham, S.W.
1880, Feb. 16	SEXBY, JOHN JAMES	Metropolitan Board of Works, Spring Gardens, S.W.
1871, Feb. 13	SHIELD, HUGH, Q.C., M.P. . .	13, King's Bench Walk, Temple, E.C.
1881, Jan. 24	SILCOCK, THOMAS BALL . . .	14, Abbey Churchyard, Bath.
1879, Apr. 28	SLADEN, ST. BARBE	1, Delahay Street, Westminster, S.W.

Date of Election.	ASSOCIATES.	
1880, Dec. 13	SMALLPEICE, GEORGE BAKER .	2, Godliman Street, Doctor's Commons, E.C.
1879, Mar. 17	SMITH, GEORGE CECIL . . .	16, Whitehall Place, S.W.
1876, May 8	SMITH, HENRY	8, John Street, Adelphi, W.C.
1868, Jul. 27	SMITH, HERBERT EDMUND . .	Darlington, Durham.
1878, Apr. 8	SMITH, JOHN SMALMAN . . .	3, Hare Court, Temple, E.C.
1879, Apr. 28	SMITH, LUMLEY, Q.C. . . .	4, Paper Buildings, Temple, E.C.
1869, Jan. 11	SMITH, WILLIAM BINNS . . .	7, St. James' Street, S.W.
1868, Nov. 9	SMYTH, EDWARD	9, Whitehall Place; and 52, Wiltshire Ro Brixton, S.W.
1879, Jan. 6	STEPHENSON, CHARLES WILLIAM	9, New Inn, Strand, W.C.
1881, Jan. 24	STEVENSON, GEORGE WILSON .	38, Parliament Street, S.W.
1876, Mar. 20	ST. QUINTIN, RICHARD SAMUEL	37, Threadneedle Street, E.C.
1875, Dec. 13	STRUTT, EDWARD GERALD, THE HON.	Terling Place, Witham, Essex.
1875, Jan. 4	STRUTT, FREDERICK, THE HON.	88, Eaton Square; and Milford House, Derby.
1877, Dec. 10	SUTTON, HENRY	Farrar's Building, Temple, E.C.
1869, Jul. 26	TAYLOR, GEORGE.	Tithe and Inclosure Commission Office, James's Square, S.W.
1880, Dec. 13	THOMAS, HUBERT	Watford, Herts.
1870, Feb. 21	THOMPSON, CHARLES WILLIAM .	Vacant Lands' Office, Guildhall, E.C.
1880, Dec. 13	*THURNALL, JOHN EDWARD . .	27, Market Place, Cambridge.
1868, Jul. 20	TROLLOPE, GEORGE FRANCIS .	15, Parliament Street, Westminster, S.W.
1880, Dec. 13	TROLLOPE, HENRY CHARLES .	Elmfield, Streatham, S.W.
1880, Jan. 5	TURNER, FRANCIS	5, Pump Court, Temple, E.C.
1878, Jan. 28	VIGERS, LESLIE ROBERT . .	4, Frederick's Place, Old Jewry, E.C.
1880, Dec. 13	VIGERS, MARTIN	52, Queen Victoria Street, E.C.
1879, Mar. 3	WAKEFIELD, GODFREY . . .	5, Chancery Lane, W.C.
1880, Mar. 1	WALKER, LEON VICTOR . . .	5, Chancery Lane, W.C.
1876, Nov. 27	*WEBSTER, RICHARD EVERARD, Q.C.,	2, Pump Court, Temple, E.C.
1871, Feb. 13	WHITE, FREDERICK MEADOWS, Q.C., *(Associate of Council)*	4, Paper Buildings, Temple, E.C.
1873, Jan. 27	WHITE, THOMAS JENNINGS . .	8, Whitehall Place, S.W.
1876, Dec. 18	WILL, JOHN SHIRESS . . .	3, Pump Court, Temple, E.C.
1875, Jan. 18	WILLIAMS, LEONARD JAMES .	6, Furnival's Inn, E.C.
1880, Jan. 19	WILLIAMS, WILLIAM HERBERT .	Llandaff, Glamorganshire.
1876, Apr. 3	WILLIAMS, WILLIAM WELSBY .	Farnham, Surrey.
1877, Jan. 29	*WILSON, RODERIC JOHN . .	24, Old Square, Lincoln's Inn, W.C.
1870, Jan. 19	WING, THOMAS TWINING . .	17, Woburn Square, W.C.
1875, May 15	WINCKWORTH, LEWIS . . .	31, Abingdon Street, Westminster, S.W.
1879, Mar. 17	WOOD, HENRY	97, Gresham Street, E.C.
1880, Dec. 13	WRIGHT, THOMAS HAWKINS. .	Grendon Hall, Northampton.
1881, Jan. 10	YOUNG, ANDREW	5, Bell Yard, Temple Bar, E.C.
1878, Dec. 9	YOUNG, MORGAN HENRY . .	6, John Street, Bedford Row, W.C.

Students.

Date of Admission.		
1881, Jan.	24	BEDELLS, CHARLES HERBERT . Toft Lawn, Hornsey Lane, N.
1879, Oct.	10	CHEVALLIER, HARVEY . . . 32, Bedford Row, W.C.
1881, Feb.	7	‖CRAWTER, JOHN, JUN. . . . Cheshunt, Herts.
1878, Dec.	20	DAVIS, CHARLES JAMES . . . 2, The Terrace, Kennington Park, S.E.
1881, Feb.	7	‖DURLACHER, ALEXANDER PERCY 29, Great George Street, S.W.
1879, Nov.	10	FURBER, HENRY AUBREY . . 6, Upper Hamilton Terrace, N.W.
1879, Mar.	31	GURNEY, HAROLD . . . . 8, Upper Hamilton Terrace, N.W.
1879, May	12	O'MEARA, ALFRED . . . . 19, Conduit Street, Regent Street, W.
1881, Feb.	7	‖PAULL, ALAN . . . . . 9, Montague Street, Russell Square, W.C.
1881, Feb.	7	‖SQUAREY, ROBERT CHARLES. . The Moot, Downton, Salisbury, Wilts.
1881, Feb.	7	‖†TARRANT, WALTER . . . . 14, Abbey Churchyard, Bath.
1881, Feb.	7	‖WARING, CHARLES EDWARD . . St. John's Square, Cardiff.
1880, Jan.	5	WATNEY, WALTER DANIEL . . The College, Cirencester.

Members and Associates are particularly requested to communicate any changes of address to the Secretary, in order to obviate delay in the transmission of the Papers, &c., to which they are entitled.

‖ Passed Preliminary Examination, 1881.

‖† Passed Proficiency Examination, 1881. Institution Prizeman.